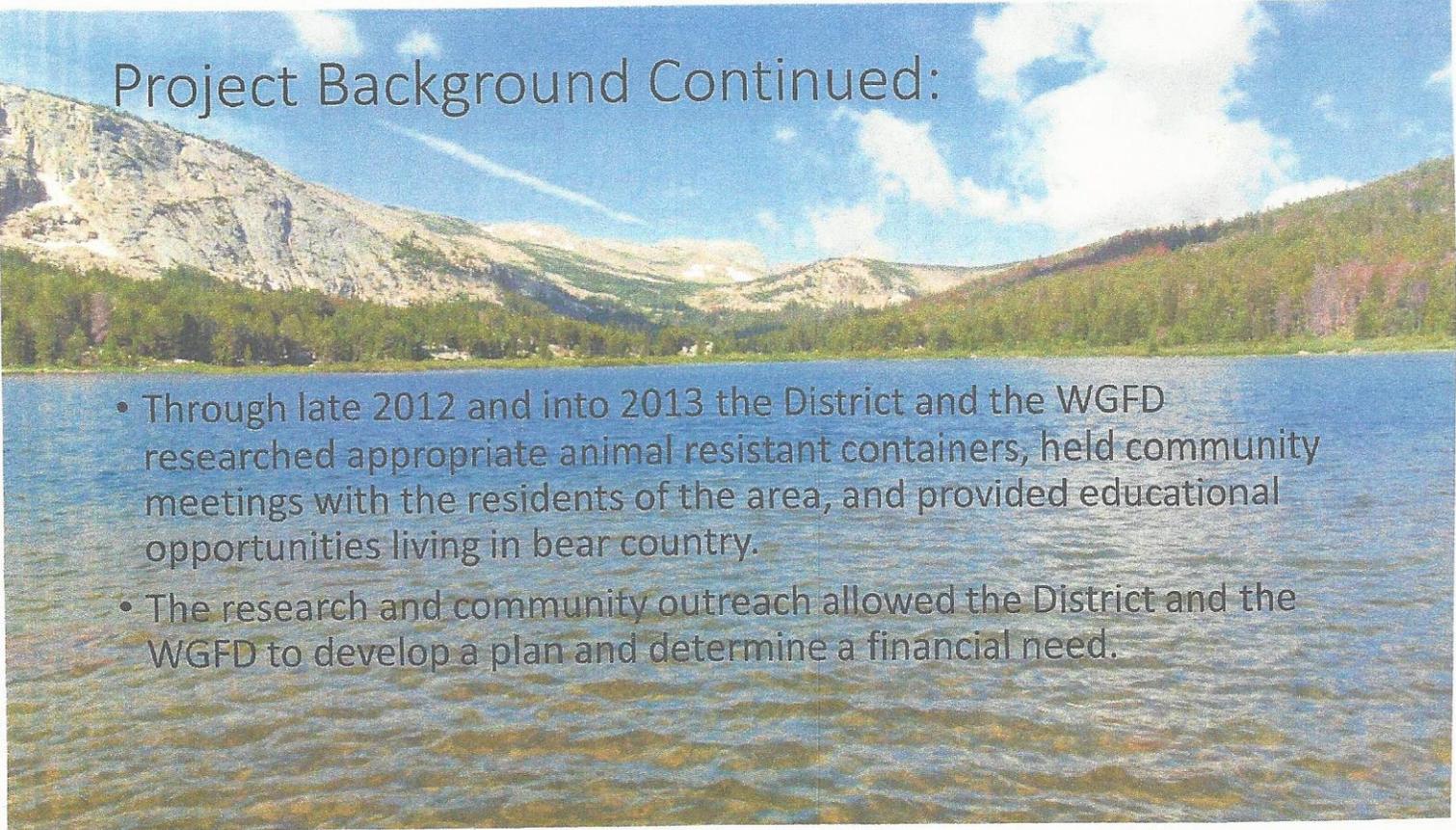
A black bear is shown in a natural, outdoor setting, possibly a field or meadow. The bear is dark-furred and is looking down towards a piece of white trash, likely a plastic bag or wrapper, lying on the ground. The background consists of green grass and some trees or bushes. The text is overlaid on the upper portion of the image.

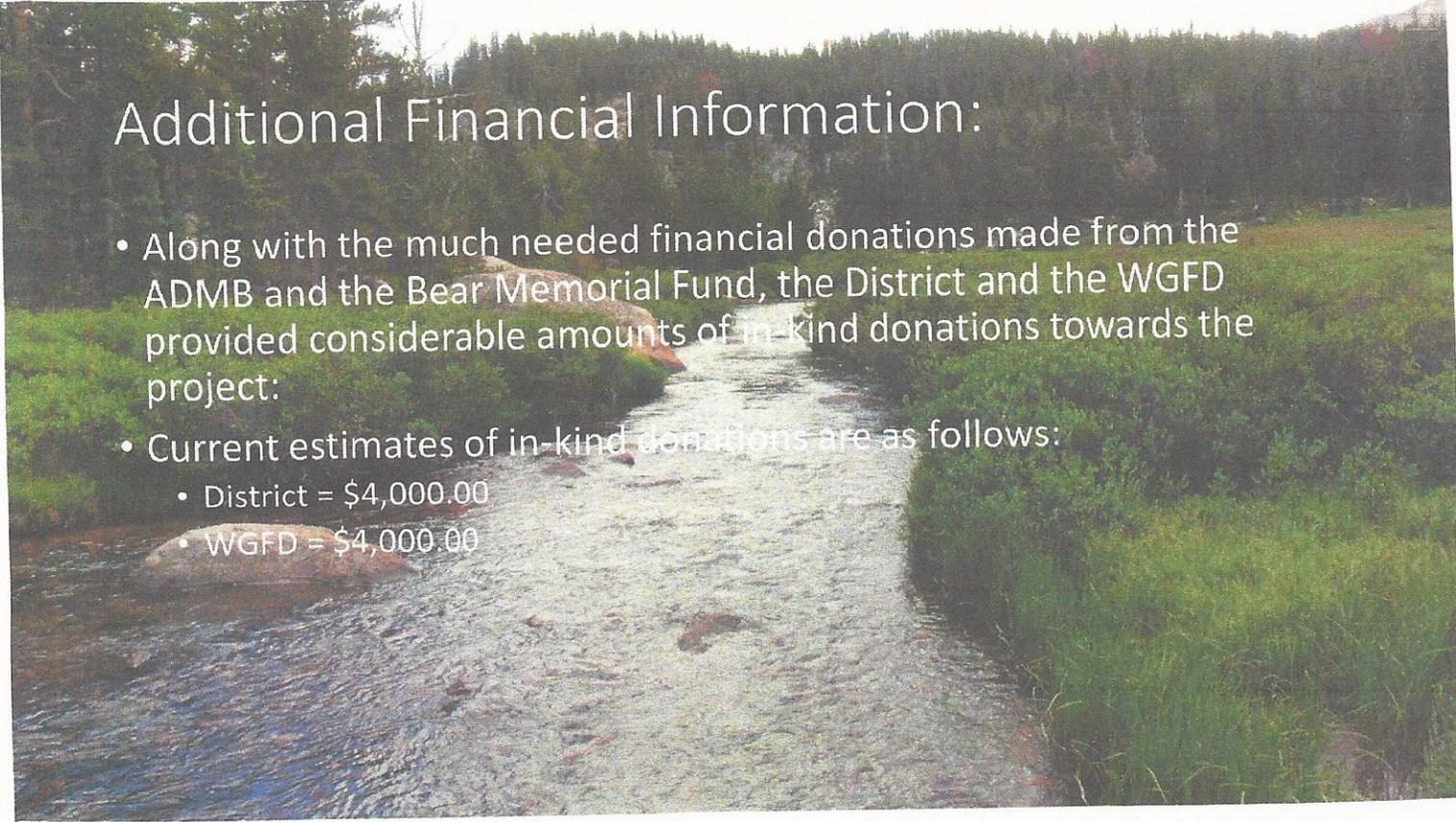
2014 – ADMB Final Report
for the Atlantic City / South Pass Area
Animal Resistant Waste Storage Project

**Organizers: The Fremont County Solid Waste Disposal District
and the Wyoming Game and Fish Department**



Project Background Continued:

- Through late 2012 and into 2013 the District and the WGFD researched appropriate animal resistant containers, held community meetings with the residents of the area, and provided educational opportunities living in bear country.
- The research and community outreach allowed the District and the WGFD to develop a plan and determine a financial need.



Additional Financial Information:

- Along with the much needed financial donations made from the ADMB and the Bear Memorial Fund, the District and the WGFD provided considerable amounts of in-kind donations towards the project:
- Current estimates of in-kind donations are as follows:
 - District = \$4,000.00
 - WGFD = \$4,000.00







Contact Information:

Fremont County Solid Waste Disposal District

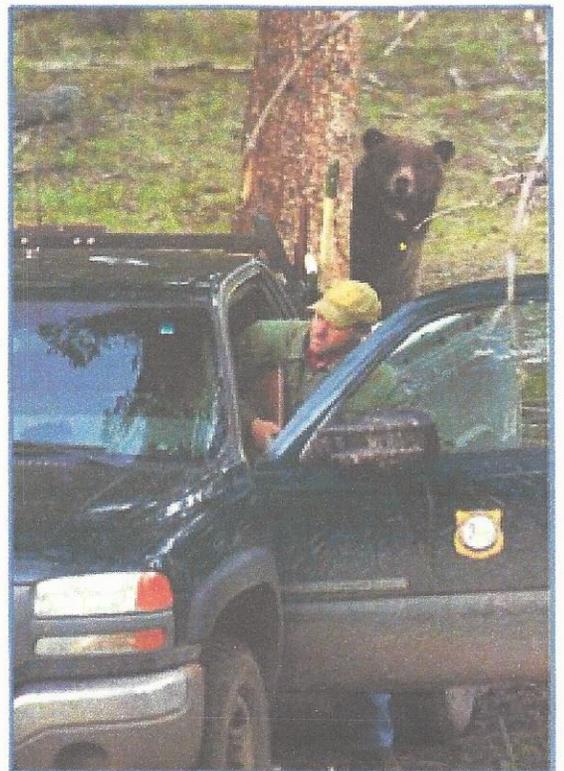
Andrew Frey, P.E.

(307) 332-7040 or afrey.fcswdd@Wyoming.com

Wyoming Game and Fish Department

Brian Debolt

(307) 330-6977 or brian.debolt@wyo.gov



Platte Valley Mule Deer Recruitment Project

Carbon County Predatory Management District (CCPMD), USDA/APHIS/Wildlife Services (WS'), Wyoming Game and Fish department (WGFD), Wyoming Animal Damage Management Board (ADMB)

03/01/2013-07/01/2014



The Platte Valley Mule Deer Recruitment Project (PVMDRP) consists of a 3 yr. cooperative effort aimed at the removal of coyotes (*Canis latrans*) within the *Platte Valley Mule Deer Initiative (PVMDI) area. Specifically, removal efforts will take place within Wyoming Hunt Areas 78, 79, and 81. These removal efforts are aimed at increasing the viability of the mule deer (*Odocoileus hemionus*) herd fawning in these areas. The goal of the PVMDRP is that enhanced coyote removal will prove beneficial to mule deer fawn recruitment.

*<http://wgfd.wyo.gov/web2011/wildlife-1000399.aspx>.

Photo courtesy WGFD.

Year 1 of 3 (03/01/13 - 07/01/2013)

Work commenced in the removal area on 03/01/2013 and continued until 07/01/2013. Efforts will continue annually through 2014 and 2015 as ADMB funding permits.

Specific ADMB funds received for the PVMDRP (2013) consisted of \$10,000.00. These funds were spent on 4.6 hrs. rotor wing time and per diem (\$3,793.80 *Sky Aviation*) and 39 hrs. fixed wing time and hazard duty (\$6,206.20 *WS*) aerial hunting.

Additionally, \$19,252.78 was spent on the project for ground work, helicopter deer classification, and administrative work. This funding came cooperatively from CCPMD operational funds (\$ 3,959.73), *WS* (\$ 4,093.05) and *WGFD* (\$11,200.00).

A total of 85 coyotes and 2 dens within 15 different *WS* cooperative agreements were taken from the project area. Of the 85 coyotes taken, 19 coyotes (22%) were retrieved for comprehensive data collection. 5 *WS*/1 *WGFD* personnel were involved in project activities.

Comprehensive data from 19 coyotes verified for sampling and analysis below:

10	Adult Male Coyotes*
8	Adult Female Coyotes**
1	Juvenile Female Coyote

* 3 of the adult male coyotes exhibited the presence of Sarcoptic mange (*Sarcoptes scabiei*) mites.

**3 of the adult female coyotes exhibited signs of having whelped (7, 5, and 3 pups. (5 avg.). 1 of the adult female coyotes (5+ yrs-contained 3 unborn whelps).

Stomach content occurrences of 19 coyotes verified for sampling and analysis below:

7	Pronghorn	9	rabbit/rodent	8	Livestock	1	bird
3	grass						

Year 2 of 3 (03/01/2014 – 07/01/2014)

Work commenced in the removal area on 03/01/2014 and continued until 07/01/2014. Efforts will continue annually through 2015 as ADMB funding permits.

Specific ADMB funds received for the PVMDRP (2014) consisted of \$15,000.00. These funds were spent on 9.55 hrs. rotor wing time and per diem (\$8,078.98 *Sky Aviation*) and 45.2 hrs. fixed wing time and hazard duty (\$6,921.02 *WS*) aerial hunting.

Additionally, \$16,280.69 was spent on the project for ground work, helicopter deer classification, and administrative work. This funding came cooperatively from CCPMD operational funds (\$4,155.81), WS (\$924.88) and WGFD (\$11,200.00 approx.).

A total of 78 coyotes and 6 dens within 14 different WS cooperative agreements were taken from the project area. Of the 78 coyotes taken, 45 coyotes (58%) were retrieved for comprehensive data collection. 6 WS/1WGFD personnel were involved in project activities.

Comprehensive data from 45 coyotes verified for sampling and analysis below:

15	Adult Male Coyotes
15	Adult Female Coyotes**
2	Juvenile Female Coyote
13	pups

* 2 of the adult coyotes exhibited the presence of Sarcoptic mange (*Sarcoptes scabiei*) mites.

**11 of the adult female coyotes exhibited signs of having whelped (7, 7, 8, 6, 2, 6, ?, 6, 8, 6, 5) for an average of 5.5 pups. (? Female was showing that she has nursed pups but placental scars were not counted)

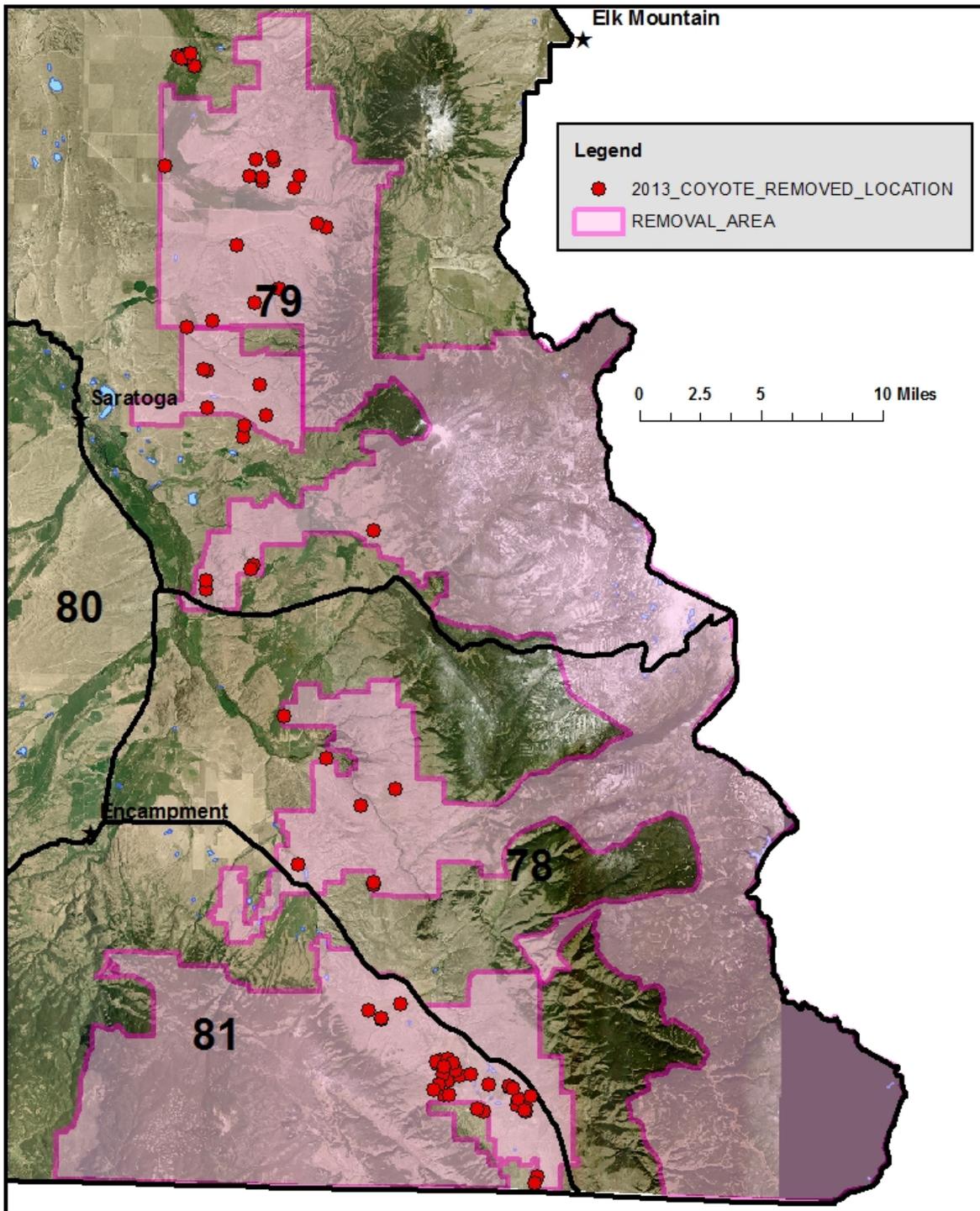
Stomach content occurrences of 45 coyotes verified for sampling and analysis below:

1	Pronghorn	21	rabbit/rodent	9	Livestock	3	deer
1	grass	1	frog	13	empty		

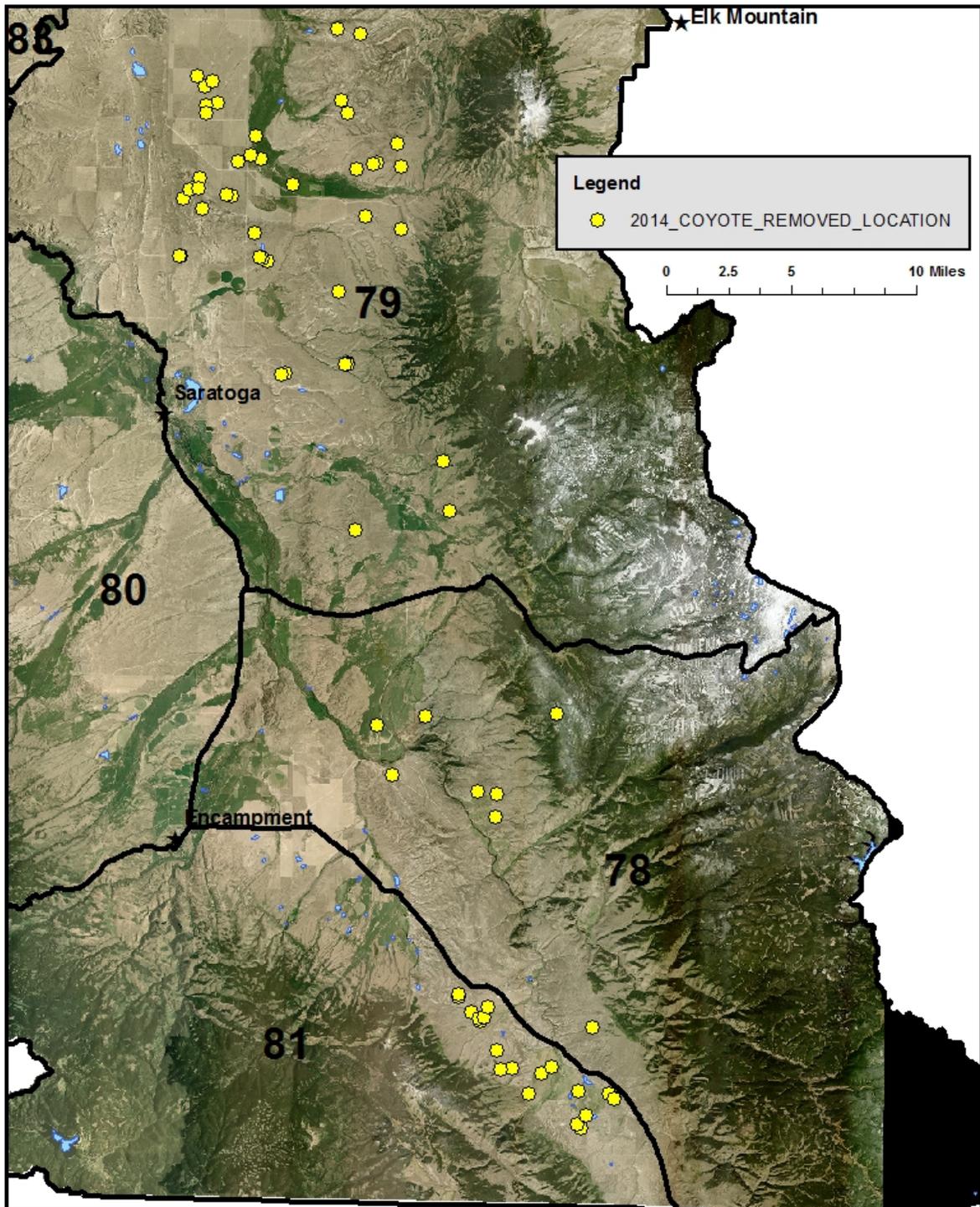
The following contributing pages in sequence are:

1. Year 1 and 2 Maps of PVMDRP removal area and provided GPS locations of coyotes taken. (WGFD and WS).
2. Mule Deer survey report (WGFD, Will Schultz).

MARCH 1 - JUNE 30, 2013 CCPMD PLATTE VALLEY MULE DEER



MARCH 1 - JUNE 30, 2014 CCPMD PLATTE VALLEY MULE DEER

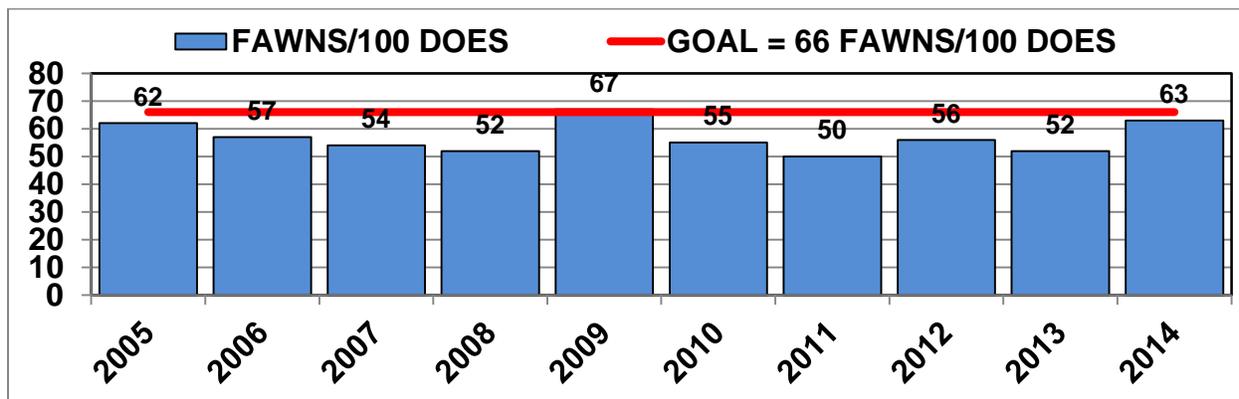


2014 Postseason Classification Report

Wyoming Game and Fish Department conducted its annual postseason helicopter survey for the Platte Valley mule deer herd unit in December of 2014. The annual fawn to doe ratio is determined from this survey's results. Generally, mule deer populations are considered to require a fawn ratio of at least 66 fawns per 100 does in order to maintain population size. During the past ten years, the fawn ratio for the Platte Valley mule deer herd unit has only met or exceeded the 65 fawn per 100 does ratio during one year (Figure 1). A multitude of environmental factors are assumed to contribute the less than adequate ratios, including poor fawn recruitment due to predation.

In 2014, the Platte Valley mule deer fawn ratio increased to 63 fawns/100 does. Although this ratio was below the desired 66 fawns/100 does, it was still considered a significant improvement for the herd unit. In addition to the benefits from this coyote removal project, the Platte Valley herd unit experienced a relatively mild winter followed by timely spring, summer, and fall precipitation. These positive changes in weather are also assumed to have contributed to the increased fawn production, due the increased quantity and quality in mule deer food. It is assumed that the observed fawn ratio would have been lower had the predator removal efforts not been implemented. Although the fawn ratio during the second year of this project increased significantly, observations of mule deer numbers over the course of this 3-year project will provide for a more reliable indicator of the project's success.

Figure 1. 2005-2014 Fawn ratios and goal for the Platte Valley mule deer herd unit, Wyoming.



There were 14 additional coyotes taken after 07/01/2013 due to continued efforts on the last year of a 3 year Pronghorn antelope recruitment project that overlapped the south end of the PVMDRP. Also, there were 31 additional coyotes for calander year 2013 that were taken in the PVMDRP before and after the ADMB project dates (03/01/2013-07/01/2013) in relation to livestock protection.

There were 6 additional coyotes for calander year 2014 that were taken in the PVMDRP outside of the ADMB project dates (03/01/2014-07/01/2014) in relation to livestock protection.

It is our hope that by continuing to remove coyotes in this area, the increase in mule deer will continue by the reduced presence of coyotes available to prey on the population. Work in the PVMDRP will continue in 2015 with a \$21,500.00 allocation from the ADMB and additional cooperative funding will continue from CCPMD, WS and WGFD.

Reports for 2015 to follow. If there are any questions please don't hesitate to contact me. Thank you.

Sincerely,

Craig S. Acres

Staff Biologist USDA/APHIS/WS

Cc:Files

Meeteetse Conservation District



P.O. Box 237 • 1906 State Street
Meeteetse, WY 82433
Phone (307) 868-2484 • FAX (307) 868-2489
mcd@tctwest.net • www.meeteetsecd-wy.gov

July 31, 2014

Kent Drake
Wyoming Animal Damage Management Board
2219 Carey Avenue
Cheyenne, WY 82002

Dear Kent,

Please find below the FY 2013-2014 final grant report and FY 2013-2014 financial reporting documents from the Meeteetse Conservation District (MCD) for the ADMB grant-funded project "Monitoring Causes of Mortality and Predation Rates of Greater Sage Grouse in the Big Horn Basin". This project began in 2011 and is ongoing as described in the presentations previously made to the ADMB.

ADMB Grant funds totaling \$44,000 requiring a total match of \$159,865 were awarded through two contracts:

- (1) \$35,000 with an effective date of 8/9/2013, requiring \$121,823 in match.
- (2) \$9,000 with an effective date of 3/5/2014, requiring \$38,042 in match.

\$25,865.26 of the \$35,000 grant expenditures under contract (1) funds occurred prior to 3/5/2014 (prior to 2nd contract). \$27,501 of \$121,823 required match expenditures under contract (1) occurred prior to 3/5/2014 (prior to 2nd contract).

- \$16,453.98 of MCD in kind contribution.
- \$11,047.13 - match expenditures.

\$5,500.00 in contributions occurred prior to 3/5/2014 (within the 1st and prior to 2nd contract).

Thus, timing of expenditures and match met the contractual requirements.

In summary, the required supporting match exceeded the \$159,865 required by the grant contract.

MCD In-Kind	28,416.95
Additional Grant Funds Match utilized in report period	\$32,509.74
Wildlife Services Personnel and Flight Time In-Kind	\$209,589.00
Wildlife Services Personnel and Flight Time reimbursed by MCD	-\$5,000.00
Total Supporting Funds (Documentation received in time for this report)	\$265,515.69

Table 1 following the technical report shows ADMB Grant fund expenditures, MCD in-kind expenditures, expenditures which used other grants and partner contributions, and the fiscal year's partner contributions (Big Horn Basin RC&D, Breitburn Operating L.P., Park County Farm Bureau, Powell - Clarks Fork Conservation District, South Big Horn Conservation District, Washakie County Conservation District, and Wyo-Ben, Inc. Table 2 following the technical report shows APHIS-Wildlife Services and local Predator Management District in-kind contributions.

Certain match expenditures (indicated as “WG&FC Grant 2012”) have been paid by the Meeteetse Conservation District and are eligible for reimbursement through the Big Horn Basin Local Working Group grant awarded to the Meeteetse Conservation District for the project titled “Spatial and Temporal Movements of Sage-Grouse in the Western Big Horn Basin”. That grant is providing support to this ongoing project for location and tracking work during the period 11/1/2012 through 9/30/2014.

Finally, below is the required evidence of citation of the ADMB as a financial supporter used in project presentations.

Cooperators

- Bighorn Basin Conservation Districts
- Bighorn Basin Predator Management Districts
- APHIS/USDA/Wildlife Services
- WYO-BEN
- BreitBurn Operating L P
- Marathon Oil Company
- Fidelity Oil Company
- Animal Damage Management Board
- V Ranch
- Belden Ranch
- Park County Farm Bureau
- Wyoming Game and Fish Department
- Bureau of Land Management
- Shoshone National Forest



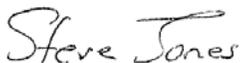
United States Department of Agriculture
Animal and Plant Health Inspection Service

Wildlife Services



National Wildlife Research Center

Respectfully Submitted,



Steve Jones
Secretary, Meeteetse Conservation District Board of Supervisors

Monitoring Causes of Mortality and Predation Rates of Greater Sage Grouse in the Big Horn Basin Project Summary Update July 31, 2014:

Since the last reporting period, Wildlife Services personnel monitored marked hens from their breeding season locations to their wintering location during fall-winter 2013. Fixed-wing aircraft were used to supplement data collection during extreme winter conditions. In March 2014, leks were monitored 1-2/week to observe hen attendance. In April 2014, Dr. Jimmy Taylor hired two seasonal technicians to assist with data collection, and these positions were paid using matching funds. Additionally during this period, a 5th study site was added to the project. Known as the Bud Kimball site, this new area south of Worland and Tensleep serves as a second control site where Wildlife Services is not contracted to implement predator control. During April 2014, 61 female sage-grouse were captured on leks, fitted with a VHF or Argos transmitter, and released at their capture sites. Approximately 46 previously marked female grouse carried over for a total of 107 tagged hens during the 2014 breeding season.

From May-July, 70 marked hens were known to have nested and 14 of those had second nest attempts after first attempt failures; 1 hen attempted and successfully fledged a third nest for a total of 85 nests. In all, 52 nests failed while 33 nests were successful. Trap camera observations at nest sites confirmed that common ravens and coyotes were the major nest predators. Golden eagles and coyotes were identified as predators of hens during the breeding season. As of 31 July 2014, 18 marked birds have died, 6 disappeared (possibly due to transmitter malfunction), and 1 slipped its transmitter leaving 82 still known to be alive.

In May 2014, Dr. Taylor and Wildlife Services personnel tested various methods to live-capture breeding ravens. The purpose was to capture ravens, attach leg bands, and uniquely mark them with wing tags that are visible in nest camera photos and by direct observation with spotting scopes. Ravens did not respond to meat baits during the breeding season, but 4 adult ravens were captured, banded, and wing-tagged using padded leg-hold traps. Capture during the raven breeding season was suspended as it remains unknown if trapping caused them to leave the area, and because it was not possible to capture both adults in breeding pairs. Raven trapping and marking will resume in fall/winter 2014 as ravens concentrate on bait piles. Resighting of marked individuals in breeding season 2015 will aid in determining occupancy rates of ravens in the Bighorn Basin. Additionally, observations of tagged individuals at grouse nests will be used to test if nests are depredated by local or transient ravens.

In July 2014, Dr. Jimmy Taylor received a grant from Wyoming Wildlife and Natural Resource Trust to hire a post-doctoral scholar at Oregon State University to aid in data analyses beginning in fall/winter 2014. Additional analyses of our existing 4-year dataset will allow us to assess fitness of marked sage-grouse in the Bighorn Basin including seasonal and annual survival, nest survival, and chick survival. Levels of predator control by study area will be used as covariates in analyses. We will estimate nesting season and over-winter survival of marked birds, nest survival, and chick survival. These fitness metrics will be used to generate a population viability model including elasticity analysis to determine which life stage is limiting the sage-grouse population in Bighorn Basin and help inform future management decisions.

Data collected from remains of marked birds will be used to estimate cause-specific mortality of adults. Cause-specific mortality estimates will allow us to determine if a single mortality factor is having a population level impact. The use of data collected from cameras placed at nest sites will allow us to model cause of nest failure and determine the magnitude impact of each cause of nest failure. These results will be related to the level of active predator management on the study sites to determine the efficacy of such activities and inform future management decisions. These analyses will provide

information regarding the impact of predators and the response of sage-grouse populations to predator control.

We will use geographic data collected from birds marked with traditional VHF and modern GPS markers to determine seasonal and annual movement patterns and home ranges. The use of GPS markers allows us to examine movement and habitat use at a scale unattainable with traditional VHF markers. We will be able to examine potential movement between study areas which will allow for better definition of unique populations of GSG in the BHB. We will be able to identify movement corridors and areas of concentration during each season, including winter. These analyses will provide information to guide identification of critical areas and inform future management decisions. We will determine if landscape use differs relative to levels of active predator control. These data will provide more insight into the size of the landscape used by GSG during nesting, brood-rearing, and over-winter periods. A cumulative report will be submitted to project cooperators in May 2015.

The generalized project areas are shown below. It should be noted that tagged birds may range out of these areas, but will still be tracked.

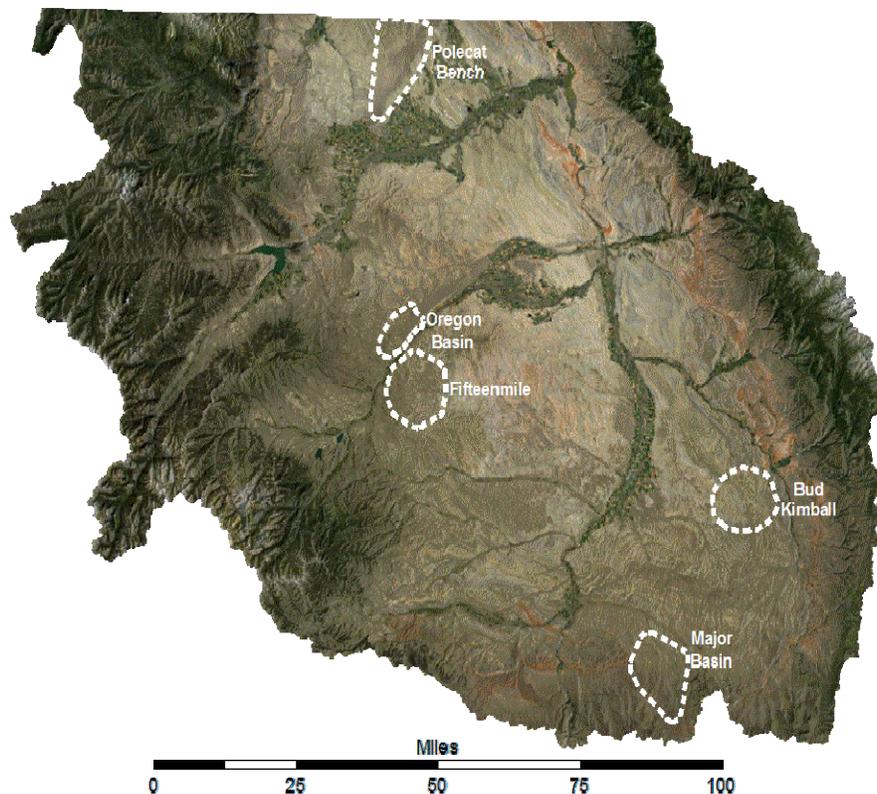


Table 1

Meeteetse Conservation District
Class QuickReport
August 9, 2013 through June 30, 2014

(From MCD QuickBooks accounting system)

Type	Date	Num	Name	Memo	Amount
Sage G. Pred Proj					
ADMB Grant 2013					
Check	8/14/13	2667	Steffen Cornell	TBR - GPS landowner chip	103.99
Check	8/14/13	2667	Steffen Cornell	TBR - fuel for WS ATV	8.33
Check	8/14/13	3013	Jim Pehringer	TBR - Fuel for camper trip	84.19
Check	8/14/13	3014	Hayden-Wing Associ	TBR - CLS (ARGOS data April - July 2013)	4,436.87
Check	9/11/13	2682	VISA	TBR - Aluminim Meterstick	14.90
Check	9/11/13	2683	Steffen Cornell	TBR - fuel for WS ATV	7.01
Check	9/11/13	2683	Steffen Cornell	TBR - supplies for sample point frame	1.97
Check	10/9/13	2702	Steffen Cornell	TBR - Metal detector rental	9.12
Check	10/9/13	2702	Steffen Cornell	TBR - Fuel for ATV	5.77
Check	11/13/13	3024	Jim Pehringer	TBR - Had camper winterized	182.00
Check	11/13/13	2714	VISA	TBR - batteries	9.97
Check	12/11/13	3025	Hayden-Wing Associ	TBR - ARGOS Data collection August-October 2013	2,351.41
Check	2/12/14	3030	USDA, APHIS	TBR - Travel & overhead expense for Dr. Jimmy Taylor from April1, 2013 - June 30, 2013	1,919.21
Check	3/12/14	3032	Hayden-Wing Associ	TBR - ARGOS data collection November 2013-January 2014	2,512.98
Check	3/12/14	2775	Steffen Cornell	TBR - Shipped ARGOS radios	52.00
Check	3/12/14	2775	Steffen Cornell	TBR - fake egg materials	20.91
Check	3/12/14	3033	Advanced Telemetry	TBR VHF Shipping-Necklace transmitters	15.00
Check	3/12/14	3033	Advanced Telemetry	TBR -VHF Necklace transmitter x 34 plit	5,579.00
Check	3/12/14	2780	VISA	TBR - Lightweight plastic shipping envelopes/bags	14.98
Check	3/12/14	2780	VISA	TBR - Styrofoam eggs	13.48
Check	4/9/14	3035	Hayden-Wing Associ	TBR - Labor	230.00
Check	4/9/14	3035	Hayden-Wing Associ	TBR - CLS - ARGOS data - Feb 2014	602.38
Check	4/9/14	3035	Hayden-Wing Associ	TBR - Microwave Telemetry (4 new transmitters) includes shipping	16,630.00
Check	4/9/14	3036	Advanced Telemetry	TBR - Necklace Transmitters x 20	3,780.00
Check	4/9/14	3036	Advanced Telemetry	TBR - Rush Fee @ \$20/ea	400.00
Check	4/9/14	3036	Advanced Telemetry	TBR - Shipping/Handling Charge	15.00
Check	4/9/14	2797	Steffen Cornell	TBR - Copper Tubing & Slider Bags for SGPP	5.62
Check	4/9/14	2802	Jim Pehringer	TBR - Propane for Student Housing @ G&F Office - Cody	26.94
Check	5/14/14	2817	VISA	TBR USPS - Postage Stamps for SGPP	24.50
Check	5/14/14	3038	Bobcat of the Big Hor	TBR Repair USFS owned 2300 Bobcat Utility Vehicle used for SGPP	204.39
Check	5/14/14	3039	Jim Pehringer	TBR Cody Winnelson Co - 113 Alkaline AA Batteries	49.36
Check	5/14/14	3039	Jim Pehringer	TBR Crum Electric - Cody - 100 Ground Rod Clamps 5/8"	171.60
Check	5/14/14	3039	Jim Pehringer	TBR Ron's Exxon - Cody - Propane for Student Housing	58.24
Check	5/14/14	3039	Jim Pehringer	TBR Walmart - Cody - Capture Equipment for SGPP (see receipt for details)	83.76
Check	5/14/14	3039	Jim Pehringer	TBR Walmart - Cody - 13 pkgs Camera Batteries for SGPP	188.87
Check	5/14/14	3039	Jim Pehringer	TBR CarQuest - Cody - Battery for USFS 2300 Bobcat for SGPP captures	100.87
Check	5/14/14	3039	Jim Pehringer	TBR Conoco Country Store - Cody - Diesel for USFS 2300 Bobcat for SGPP captures	12.91
Check	5/14/14	3039	Jim Pehringer	TBR Telonics - Directional Antenna & Switch Box for SGPP Aerial Locations	416.39

Table 1

Meeteetse Conservation District
Class QuickReport
August 9, 2013 through June 30, 2014

Type	Date	Num	Name	Memo	Amount
Check	5/14/14	3039	Jim Pehringer	TBR KMart - Cody - 5 SD Cards for Cameras Used in SGPP	103.95
Check	5/14/14	3039	Jim Pehringer	TBR Fastenal - Camera Mount Equipment for SGPP	130.38
Check	5/14/14	3040	Grant Belden	TBR Thermopolis Hardware - SGPP Capture Net-Fire Line Replacement Parts	296.26
Check	5/14/14	3041	Emily R Hepler	TBR ATV CourseRider Registration Fees - Class to be held 05/10/2014 - Class ID 1174247 Verifica...	0.00
Check	5/14/14	2817	VISA	TBR Amazon.com - Garmin Handheld Navigator (GPS)	298.92
Check	5/14/14	2817	VISA	TBR Bally Ribbon Mills - Natural Tubular Teflon Tape (50' @ \$8.40/foot) = \$420.00 + \$35.86 shipping	455.86
Check	5/14/14	3044	Jim Angal	TBR WEA Market - Diesel for USFS Side by Side	12.13
Check	5/14/14	3045	Steve Jones	TBR Amazon.com - 25 SD Cards for SGPP Cameras @ \$17.93	459.17
Check	5/14/14	3045	Steve Jones	TBR Walmart - 8 Batteries for SGPP Cameras @ \$13.97 each	111.76
Check	5/14/14	2819	Steffen Cornell	TBR - Walmart - Tick Repellent & Supplies to make fake eggs	8.07
Check	5/28/14	2831	Montana Mapping & (TBR Update Jim Peheringer's GPS Map Chip	30.00
Check	6/11/14	2845	VISA	TBR - Amazon.com - Avery Labels	6.69
Check	6/11/14	2845	VISA	TBR - Amazon.com - RAM Mount Cradle Holder for Garmin GPS	11.98
Check	6/11/14	3049	Steve Jones	TBR - Walmart - Batteries for cameras 4 @ \$13.97 = 55.88	55.88
Check	6/11/14	3051	Jim Angal	TBR - Wea Market - Gas for 4-wheelers	17.34
Check	6/11/14	2845	VISA	TBR - GSM LLC cameras	1,657.69
Total ADMB Grant 2013					44,000.00

MCD In Kind

Check	8/14/13	2662	Blaise Allen	In Kind 96 miles x .565 #11-1409 Pick up ATV for SGPP	54.24
Check	8/14/13	2662	Blaise Allen	In Kind 31 miles x .565 #11-1409 SGPP in OB with UW	17.52
Check	8/14/13	2662	Blaise Allen	In Kind 18 miles x .565 #11-1409 SGPP in OB with UW	10.17
Check	8/14/13	2662	Blaise Allen	In Kind 16 miles x .565 #11-1409 Veg surveys in FM	9.04
Check	8/14/13	2662	Blaise Allen	In Kind 20 miles x .565 personal ATV Veg surveys in FM	11.30
Check	8/14/13	2662	Blaise Allen	In Kind 3 miles x .565 #11-1409 Look for FM28 ARGOS pack	1.70
Check	8/14/13	2662	Blaise Allen	In Kind 34 miles x .565 #11-1409 Veg surveys in OB	19.21
Check	8/14/13	2662	Blaise Allen	In Kind 81 miles x .565 #11-1409 Veg surveys on PCB	45.77
Check	8/14/13	2662	Blaise Allen	In Kind 31 miles x .565 #11-1409 Veg surveys in OB	17.52
Check	8/14/13	2662	Blaise Allen	In Kind 20 miles x .565 #11-1409 Veg surveys in FM	11.30
Check	8/14/13	2662	Blaise Allen	In Kind 21 miles x .565 #11-1409 Veg surveys in FM	11.87
Check	8/14/13	2667	Steffen Cornell	In Kind 20 miles x .565 #11-21291 Camera placement on FM16	11.30
Check	8/14/13	2667	Steffen Cornell	In Kind 38 miles x .565 #11-21291 Search for Argos OB79554	21.47
Check	8/14/13	2667	Steffen Cornell	In Kind 175 miles x .565 #11-21291 MB nest veg surveys	98.88
Check	8/14/13	2667	Steffen Cornell	In Kind 33 miles x .565 #11-21291 Search for ARGOS FM42	18.65
Check	8/14/13	2667	Steffen Cornell	In Kind 30 miles x .565 #11-21291 OB veg surveys	16.95
Check	8/14/13	2667	Steffen Cornell	In Kind 32 miles x .565 #11-21291 5 OB nest surveys with UW	18.08
Check	8/14/13	2667	Steffen Cornell	In Kind 24 miles x .565 #11-21291 FM nest veg surveys	13.56
Check	8/14/13	2667	Steffen Cornell	In Kind 64 miles x .565 #11-21291 Search for FM30 and FM veg surveys	36.16
Check	8/14/13	2667	Steffen Cornell	In Kind 21 miles x .565 #11-21291 3 OB veg surveys	11.87
Check	8/14/13	2667	Steffen Cornell	In Kind 11 miles x .565 #11-21291 FM nest veg surveys	6.22
Check	8/14/13	2667	Steffen Cornell	In Kind 35 miles x .565 #11-21291 Pick up ARGOS yaggi & search for FM29	19.78
Check	8/14/13	2667	Steffen Cornell	In Kind 11 miles x .565 #11-21291 FM 38 veg survey	6.22

Table 1

Meeteetse Conservation District
Class QuickReport
August 9, 2013 through June 30, 2014

Type	Date	Num	Name	Memo	Amount
Check	8/14/13	2667	Steffen Cornell	In Kind 24 miles x .565 #11-21291 Search for ARGOS FM30	13.56
Check	8/14/13	2668	Steve Jones	In Kind 2.0 hours - SGPP	0.00
Check	8/14/13	3015	Haley Sessions	In Kind - 9 hours @ \$10. p/hr - Work with MCD on 8/2/2013 - Vegetation Surveys with Blaise	90.00
Check	8/14/13	3016	Stori Hlavnicka	In Kind - 9 hours @ \$10. p/hr - Work at MCD on 8/2/2013 - Vegetation Surveys with Blaise	90.00
Check	8/31/13	2670	Blaise A. Allen	In Kind	1,707.00
Check	8/31/13	2672	Steffen C. Cornell	In Kind	1,228.40
Check	9/11/13	2677	Blaise Allen	In Kind 82 miles x .565 #11-1409 PCB Surveys	46.33
Check	9/11/13	2677	Blaise Allen	In Kind 24 miles x .565 #11-1409 OB Surveys	13.56
Check	9/11/13	2677	Blaise Allen	In Kind 36 miles x .565 #11-1409 Bird tracking	20.34
Check	9/11/13	2677	Blaise Allen	In Kind 33 miles x .565 #11-1409 FM surveys	18.65
Check	9/11/13	2677	Blaise Allen	In Kind 97 miles x .565 #11-1409 PCB surveys	54.81
Check	9/11/13	2677	Blaise Allen	In Kind 104 miles x .565 #11-1409 PCB tour and trip to Cody	58.76
Check	9/11/13	2677	Blaise Allen	In Kind 37 miles x .565 #11-1409 Fenton Pass surveys	20.91
Check	9/11/13	2677	Blaise Allen	In Kind 69 miles x .565 #11-1409 LWG Meeting in Cody	38.99
Check	9/11/13	3020	Hunter Hicks	In Kind - 11 hours @ \$10 p/hr - Nest Vegeation Surveys with MCD on 8/21/13 - SGPP MCD In Kind	110.00
Check	9/11/13	2683	Steffen Cornell	In Kind 80 miles x 0.565 #11-21291 - PB Veg surveys	45.20
Check	9/11/13	2683	Steffen Cornell	In Kind 18 miles x 0.565 #11-21291 - OB veg surveys	10.17
Check	9/11/13	2683	Steffen Cornell	In Kind 58 miles x 0.565 #11-21291 - ATV training- Powell	32.77
Check	9/11/13	2683	Steffen Cornell	In Kind 69 miles x 0.565 #11-21291 - PB veg surveys	38.99
Check	9/11/13	2683	Steffen Cornell	In Kind 292 miles x 0.565 #11-21291 - MB veg surveys	164.98
Check	9/11/13	2683	Steffen Cornell	In Kind 12 miles x 0.565 #11-21291 - find ARGOS bird OB26 dead	6.78
Check	9/30/13	2687	Blaise A. Allen	In Kind	1,230.00
Check	9/30/13	2689	Steffen C. Cornell	In Kind	658.60
Check	10/9/13	2701	Blaise Allen	In Kind 31 miles x 0.565 #11-1409 - Searching for ARGOS pack on PCB	17.52
Check	10/9/13	2701	Blaise Allen	In Kind 31 miles x 0.565 #11-1409 - LWG Meeting in Cody	17.52
Check	10/9/13	2702	Steffen Cornell	In Kind 52 miles x 0.565 #11-21291 - Look for dead bird PB26 (9/13)	29.38
Check	10/9/13	2702	Steffen Cornell	In Kind 52 miles x 0.565 #11-21291 - Look for dead bird PB26 (9/16)	29.38
Check	10/9/13	2702	Steffen Cornell	In Kind 178 miles x 0.565 #11-21291 - Nest veg surveys in MB	100.57
Check	10/9/13	2702	Steffen Cornell	In Kind 31 miles x 0.565 #11-21291 - Look for FM30 on ZE	17.52
Check	10/9/13	2702	Steffen Cornell	In Kind 10 miles x 0.565 #11-21291 - Look for FM30	5.65
Check	10/31/13	2707	Blaise A. Allen	In Kind	1,825.50
Check	10/31/13	2708	Steffen C. Cornell	In Kind	1,389.35
Check	11/13/13	2718	Steffen Cornell	In Kind 30 miles x 0.565 #11-21291 - Look for FM30 in Fifteen Mile	16.95
Check	11/13/13	2718	Steffen Cornell	In Kind 176 miles x 0.565 #11-21291 - Finding MB26	99.44
Check	11/13/13	2718	Steffen Cornell	In Kind 42 miles x 0.565 #11-21291 - Look for OB28 and FM30	23.73
Check	11/30/13	2721	Blaise A. Allen	In Kind	1,127.10
Check	11/30/13	2723	Steffen C. Cornell	In Kind	1,200.65
Check	12/31/13	3026	Blaise A. Allen	In Kind	136.00
Check	12/31/13	2737	Steffen C. Cornell	In Kind	804.75
Check	1/8/14	2739	Steffen Cornell	In Kind 14 miles x 0.565 #11-21291 Find FM 30 bird	7.91
Check	1/8/14	2744	Conference Call.com	In Kind SGPP Steering Committee Meeting at MCD on 12/19/2013	253.78
Check	1/31/14	3028	Blaise A. Allen	In Kind	578.00
Check	1/31/14	2756	Steffen C. Cornell	In Kind	1,659.45

Table 1

Meeteetse Conservation District
Class QuickReport
August 9, 2013 through June 30, 2014

Type	Date	Num	Name	Memo	Amount
Check	2/28/14	3031	Blaise A. Allen	In Kind Wages	69.70
Check	2/28/14	2768	Steffen C. Cornell	In Kind	856.55
Check	3/12/14	2781	Steve Jones	In Kind 1.0 hour - SGPP Admin	
Check	3/31/14	3034	Blaise A. Allen	SGPP-In Kind	136.00
Check	3/31/14	2786	Steffen C. Cornell	SGPP - In Kind	913.90
Check	4/30/14	3037	Blaise A. Allen	In Kind - PB Captures, Pick up Argos in Worland, Data Entry	822.80
Check	4/30/14	2805	Steffen C. Cornell	In Kind - SGPP activities	1,972.10
Check	4/30/14	2805	Steffen C. Cornell	In Kind SGPP ARGOS location activities	271.95
Check	5/14/14	2819	Steffen Cornell	In Kind - SGPP Total Mileage for April, 2014 = 483 miles @ \$0.56 - Temporary Plates	270.48
Check	5/14/14	2820	Blaise Allen	In Kind - 151 miles @ 0.56 #23120 for Bk captures	84.56
Check	5/14/14	2820	Blaise Allen	In Kind - 32 miles @ 0.56 #23120 for PB Captures	17.92
Check	5/14/14	2820	Blaise Allen	In Kind - 31 miles @ 0.56 #23120 for OB30 & 46 camera placements	17.36
Check	5/14/14	2820	Blaise Allen	In Kind - 116 miles @ 0.56 #23120 to get ARGOS from Doug in Worland	64.96
Check	5/14/14	2820	Blaise Allen	In Kind - 45 miles @ 0.56 #23120 for FM13 & FM16	25.20
Check	5/14/14	2820	Blaise Allen	In Kind - Breakfast during BK captures	6.70
Check	5/14/14	3047	Roger's Sport Center	In Kind - Refundable security deposit for ATV rental	2,000.00
Check	5/30/14	2834	Steffen C. Cornell	In Kind - SGPP - 81.9 hrs	1,515.15
Check	5/30/14	2834	Steffen C. Cornell	In Kind - SGPP ARGOS Location Activities - 14.5 hrs	268.25
Check	5/30/14	3048	Blaise A. Allen	In Kind - SGPP	426.70
Check	6/11/14	2847	Steffen Cornell	In Kind - Look for PB46, PB nest cams - 129 miles @ \$0.56 = \$72.24 #11-25218	72.24
Check	6/30/14	3052	Blaise A. Allen	In Kind - Data entry, OB32a, 32b, 18, built Jones cover board, worked on getting past veg survey...	753.10
Check	6/30/14	2854	Steffen C. Cornell	In Kind - Monitoring SGPP activities - 125.6 hrs	2,323.60
Total MCD In Kind					28,416.95
MCD TBR					
Check	6/11/14	2845	VISA	TBR - GSM LLC Cameras	850.00
Check	6/30/14	2854	Steffen C. Cornell	TBR - ARGOS locates - 8.9 hrs	164.65
Total MCD TBR					1,014.65
WG&FC Grant 2012					
Check	2/12/14	3029	Agricultural Research	TBR Support-from WG&FC Grant 2012 - research assistant for Dr.Jimmy Taylor's research project	11,000.00
Check	3/12/14	3033	Advanced Telemetry	TBR -VHF Necklace transmitter x 34 split	405.00
Check	5/14/14	3042	Hot Springs County F	TBR Flight Time Reimbursement for 2013 @ 33% of \$5,000 Total Cost	1,650.00
Check	5/14/14	3043	Park County Predato	TBR Flight Time Reimbursement for 2013 @ 67% of \$5,000 total cost	3,350.00
Check	5/14/14	3046	Roger's Sport Center	TBR ATV rental for location work	2,000.00
Check	6/11/14	3050	Blaise Allen	TBR - SGPP Mileage 219 miles @ \$.056 = \$122.64 #23120	122.64
Total WG&FC Grant 2012					18,527.64
Wyo-Ben Funds					
Check	5/14/14	3046	Roger's Sport Center	ATV rental - match for WGFD/BHBLWG Grant	2,000.00

Table 1

Meeteetse Conservation District
Class QuickReport
August 9, 2013 through June 30, 2014

<u>Type</u>	<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Memo</u>	<u>Amount</u>
Check	6/11/14	2844	VISA	GSM, LLC - Cameras 25 @ \$109.95 = \$2,748.75 + \$53.00 Shipping (Wyo-Ben Funds)	2,801.75
Check	6/11/14	2844	VISA	Amazon.com - Transcend 16GB Memory Cards 60 @ \$9.99 = \$599.40 + \$8.77 Shipping	608.17
Check	6/11/14	2844	VISA	Amazon.com - Transcend 32GB Memory Card 25 @ \$17.93 = \$448.25 + \$10.92 Shipping	459.17
Check	6/11/14	2844	VISA	Walmart - Batteries 11 pkgs @ \$13.97=\$153.67	153.67
Check	6/11/14	2845	VISA	GSM LLC - 25 cameras @ \$109.95 = \$2,748.75 + \$53.00 Shipping	1,294.06
Check	6/11/14	2850	GSM, LLC	Cameras - 50 @ \$109.95 = \$5,497.50 + \$106.00 Shipping	5,603.50
Total Wyo-Ben Funds					<u>12,920.32</u>
WyPGLT Grant 2012					
Check	8/14/13	2667	Steffen Cornell	In Kind - Dry erase markers	2.34
Total WyPGLT Grant 2012					<u>2.34</u>
Sage G. Pred Proj - Other					
Check	8/14/13	3013	Jim Pehringer	ADMB Meeting - lunch for Jim Pehringer, Stev, Steffen, Jimmy Taylor & Blaise	44.79
Total Sage G. Pred Proj - Other					<u>44.79</u>
Subtotal Non-grant & not MCD InKind					<u>32,509.74</u>
Total Sage G. Pred Proj					<u>104,926.69</u>
TOTAL EXPENDITURES					104,926.69
CONTRIBUTIONS (July 2013 through June 2014)					
	7/11/13		Park County Farm Bureau		500.00
	8/7/13		Washakie County Conservation District		2,000.00
	12/17/13		Big Horn Basin RC&D		2,500.00
	1/15/14		South Big Horn Conservation District		500.00
	2/5/14		Breitburn Operating L.P.		1,500.00
	2/5/14		Powell - Clarks Fork Conservation District		1,000.00
	5/6/14		Wyo-Ben, Inc		27,540.90
TOTAL CONTRIBUTIONS					<u>35,540.90</u>

Table 2**APHIS Wildlife Services In Kind Contribution ADMB Grant (July 2013 through June 2014)**

Estimated Value of In-Kind services provided.

BigHorn Basin Sage Grouse Project from 7/01/2013 to 6/30/2014

Field Work

WS Specialists 3828 hours X\$35/hour includes sal, benefit, vehicle, horse and dog hire, per diem and misc. = \$133,980
 * Paid primarily by County PMDs

Supvy Biologist# 301 hoursx 50.50/hr includes sal, benefits, vehicle, per diem, horse and dog hire and misc = \$15,200
 # Paid by WS

Biologist# 3.75 hours X 47.21/hr includes sal, benefits, vehicle etc. = \$177 # Paid by WS

Pilot (field work) 5 hours X \$55/hr includes sal, benefits, vehicle etc. = \$275 # Paid by WS

Total \$149,632.00

Aerial 174.8 hours flown 150/hr paid by County PMDs and 134.43/hr by WS (cost share program)
 \$150/hr X 174.8= \$ 26,220 paid by counties, \$134.43X174.8 = \$23,498 paid by WS

Outreach

JP 8 X 50.50=\$404

ADMIN

WS Specialists 180 hours x 35/hour = \$6,300

Supv Biologist 70 hours x 50.50/hour = \$3,535

Total: \$9,835

Grand Total \$209,589.00 8/1/2014

Livestock Carcass Management Program
 Final Report for the end of the grant
 Dusty Lasseter, Wyoming Game and Fish Department

Program Description: The Carcass Management Program (CMP) was started in June of 2008 with the purpose of removing livestock carcasses from private agricultural lands in order to minimize conflicts with grizzly bears and promote human safety.

Progress: From August 1, 2013 to July 31, 2014 (fiscal year end) there have been 128 carcasses (in 98 trips) that have been retrieved from private ranch lands. Currently there are approximately 25-30 landowners participating in the CMP. The average monthly cost of the program for the last year was \$993.38 giving an average cost per carcass \$96.12. After the program started in 2008 there has been an increase of use and in early 2012 several new landowners have started utilizing the program (Figure 1). Also, since the beginning of the CMP there have been several ranches close their carcass pits in order to reduce human-bear conflicts and in 2013 there have been several additional pits that have been closed (see Figure 2.)

Month	Amount
July	\$ 1,026.00
August	\$ 702.00
September	\$ 216.00
October	\$ 1,026.00
November	\$ 1,215.00
December	\$ 891.00
January	\$ 1,242.00
February	\$ 904.50
March	\$ 1,674.00
April	\$ 999.00
May	\$ 1,201.50
June	\$ 823.50
Net Total	\$ 11,920.50
Landfill Costs	\$ 1,200.00
Total	\$ 13,120.50

Table 1.

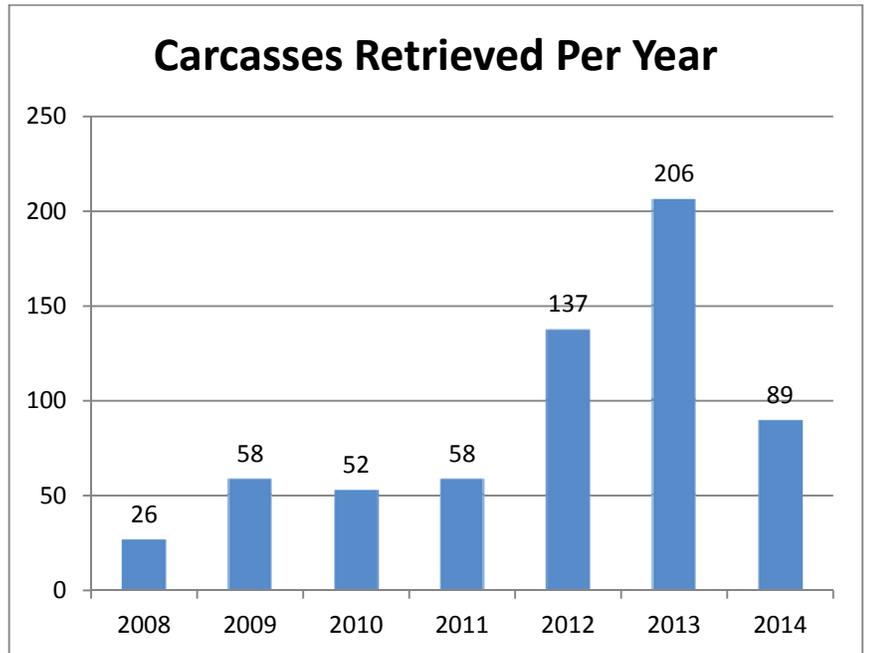


Figure 1.

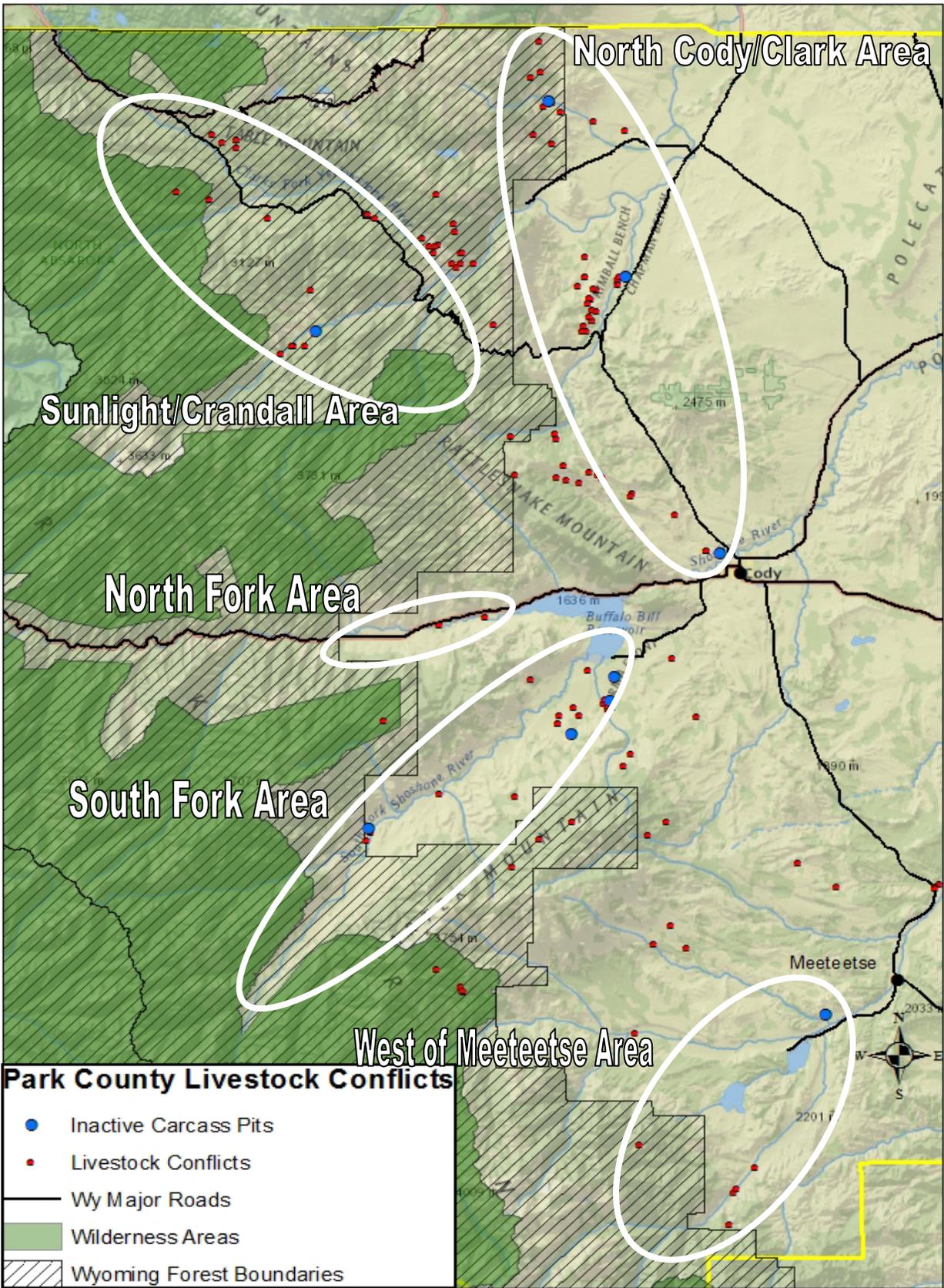


Figure 2.



Wyoming Agriculture in the Classroom

Animal Damage Management Board

Country to Classroom Final Report

June 27, 2014

Wyoming Agriculture in the Classroom (WAIC) appreciates the support and investment in our publication, *Country to Classroom*. In 2012, WAIC made major revisions to the look and concept of the publication. We were very pleased with educators' feedback but knew the publication could still be modified to meet educator and students' needs.

For our 2013 publication WAIC changed our format from one publication for 3rd, 4th and 5th graders to three separate publications to better meet the appropriate reading level and engagement pieces for students. The new edition is in a similar booklet style as the 2012 model in look but greater emphasis was put into content and the engagement piece. WAIC included a Teacher Guide for educators unfamiliar with agriculture and natural resource topics to have a resource and answers right at their fingertips. This year WAIC was excited to offer an online activity for students' to test their knowledge after completing the lessons. We encourage you to view the publication and online activity at www.wyaitc.org.

The Predator Management section is in the 5th grade edition and focuses on wolves in Wyoming. WAIC worked with Kent Drake for content and pictures, we appreciate the guidance in choosing a topic that would be relevant for students and their family in Wyoming. In total 9,700 student editions were printed and distributed with 1,200 teacher editions.

We received positive feedback from schools and educators with the new direction of our publication and we are confident we are on the right track. The *Country to Classroom* serves as a lesson prompt for our Bookmark Contest. With this new *Country to Classroom* format, our bookmark entries doubled yet again this year from 697 entries in 2013 to 1,474 entries this past year. This increase in participation reinforces the feedback we have received concerning our publication. Please find attached the financials for the *Country to Classroom*. If you have any questions, please do not hesitate to contact WAIC. Thank you again for your support.

1:38 PM

06/17/14

Accrual Basis

Wyoming Agriculture in the Classroom
Profit & Loss by Class-Country to Classroom
July 1, 2013 through June 17, 2014

	<u>Country to Classroom</u>	<u>TOTAL</u>
Ordinary Income/Expense		
Expense		
60050 · Awards	300.00	300.00
61115 · Material	695.94	695.94
61450 · Postage	3,394.43	3,394.43
61460 · Printing Expense	8,325.73	8,325.73
61600 · Travel	146.90	146.90
61900 · Web Site Maintenance	307.65	307.65
62100 · Professional Fees	5,475.00	5,475.00
62455 · Contract Labor	4,203.75	4,203.75
65550 · Payroll Expense	4,643.68	4,643.68
66900 · Meals	216.09	216.09
Total Expense	<u>27,709.17</u>	<u>27,709.17</u>
Net Ordinary Income	<u>-27,709.17</u>	<u>-27,709.17</u>
Net Income	<u><u>-27,709.17</u></u>	<u><u>-27,709.17</u></u>

The Adon Wildlife Project began in May of 2013 with our four sportsmen that are on the board, Ken Ford, Merv Griswold, Dave Daigle and BJ Clarke. Along with three of our contract trappers - Scott Huber, Calvin Taylor and Duke Campbell began meeting with Game and Fish personnel in this area to establish a project area and was able to acquire Game and Fish data for that area. Our board members and trappers had several meetings with the Game and Fish personnel and determined the parameters of the project. The Game and Fish personnel supported us as far as the planning process went, but they could not help us with funding or with hours of man power. The personnel continued to attend our annual meetings and updated us with data that they would acquire from hunting surveys.

The board hired a biologist, Rio Franzman to finalize the study and to gather and compile wildlife numbers from our own aerial and ground survey. Please see the attached quarterly report from Rio. After the initial count was done, the predator control efforts began. Aerial flight time and predator harvest is as follows:

February 7, 2014 – 4.6 hours – 11 coyotes

March 3, 2014 – 2 hours – 3 coyotes

March 29, 21014- 3.5 hours- 6 coyotes

April 14, 2014 – 5.4 hours – 12 coyotes. Out of those 12 coyotes they analyzed 5 of the females – One female had had 8 pups, another 5 pups , another 4 pups, another 7 pups and one was dry.

May 5, 2014 – 2.5 hours – 1 male coyote

May 13, 2014- 4.5 hours – 2 male coyotes

May 15, 2014 – 6.5 hours – 1 male coyote, 1 female coyote, 5 pups

May 26, 2014 – 4 hours – 1 female coyote and 10 pups

We have had four producers and one outfitter support our project financially. We have made efforts to contact all of our livestock producers in the project area and have kept them informed of our progress.

The Campbell County Predatory Board and Contract Trappers are extremely disappointed in the termination of the project due to lack of funding from the ADMB Board. The board has voted to continue to support the livestock producers and we will continue to accept the guidance of the Game and Fish when they attend our annual meetings. We are going to try other organizations to help fund this project that will benefit both livestock producers and wildlife in general. The Board will continue to do a final count, but because of the high vegetation due to the wet spring, we are waiting until later this summer or fall or do the count.

If you know of any other funding possibilities, we would be appreciative of any directions you could give.

Campbell County Predatory Board
Adon Wildlife Project Financial Sheet
 July 1, 2013 - June 30, 2014

BEGINNING BALANCE		\$0.00
INCOME	July '13 - June '14	
ADMB Special Project Money	\$ 24,700.00	
Landowners Contribution	\$ 3,550.00	
Total Income	\$ 28,250.00	\$ 28,250.00
EXPENSES		
Aerial in the Project Area	\$ 6,453.35	
Groundwork Personnel	\$ 4,752.52	
Biologist	\$ 10,411.18	
Project Expenses before July 1, 2013 (groundwork)		\$ 3,163.75
Total Expenses	\$ 21,617.05	\$ 24,780.80
Net Profit		\$ 3,469.20
Reserves from Landowner's Contributions		\$ 3,469.20
In Kind Income \$ 7250.00		

Introduction

The Campbell County Predator Management Board (CCPMB) (Wyoming) recognizes the importance that the mule deer as well as other big game animals play in our local economy and ecosystem. Over the last several decades, many landowners and sportsman in northeast Wyoming have commented on the decline of mule deer numbers. The CCPMB believes that the decline of deer numbers may have a correlation with the 1972 executive order issued by President Nixon banning the use of all toxicants for predation control measures, and the high numbers of predators (coyotes, bobcats, mountain lions) in the area are one of the reasons why the sub-population is in decline.

The CCPMB is conducting a study analyzing the impacts that different levels of predation control may have on big game populations. Due to the importance that local wildlife play in the local economy, survey counts and data collection will take place on mule deer, pronghorn, elk, and white-tailed deer to further understand the residual impacts that predation plays on those species.

Purpose of the Quarterly Report

The greatest purpose of the produced quarterly report is to keep landowners and interested parties involved and up to date on the progress of the study. The report will be produced at the conclusion of each quarter, and will be made available to all interested parties.

Project Update

We are all pleased at the response the project has generated. Many people in Northeast Wyoming are excited about the prospects of a project of this nature. The first round of aerial and ground surveys (which will give us a baseline) were completed by October 1st of 2013. Please see the ground and aerial survey results on pg. 3 of this report.

The CCPCB annual meeting was held Dec. 4th 2013 at the George Amos Library, where an update was given by Rio Franzman of Habitat Management, Inc.



Anticipated Schedule

The 1st quarter of 2014 anticipates to be busy on the ABGPS. The vast majority of the aerial gunning and trapping will happen during the harshest time of the year. Over 20 additional days will be spent on the ground (or in the air) solely on predator control efforts. As days become more entrenched, we will contact individual landowners with a more up to date schedule.

The location of each trapped or gunned predator will be recorded, as well as any ancillary data that may be useful in the control efforts. The premise behind this idea, is that we will begin to develop a well-defined distribution map of predators in the area. We can then layer this against the distribution of big game animals (collected from surveys) and target the "hot bed" areas where predation control efforts will be most effectively utilized.

Funding

Funding is the life line of projects of this nature. It costs money to send professional trappers in the air, and professional scientist to interpolate data and survey. Below is an update on who has helped fund the project as well as who we plan on approaching to help fund the project.

Mule Deer Foundation – The Mule Deer Foundation rejected our submitted proposal citing that they do not fund projects of this nature.

Rocky Mountain Elk Foundation – An application has begun and will be submitted for the state PAC to review. We will appear in front of the RMEF Feb. 18th, 2014 in Cheyenne, WY.

Animal Damage Management Board – The Animal Damage Management Board (ADMB) has already granted \$24,700.00, we have an additional opportunity to approach the (ADMB) for additional funding.

High Plains Outfitters – This outfitter has given us a generous donation to support the predation and study efforts in the project area.

National Wild Turkey Federation – The NWTF has rejected our proposal citing they only participate in habitat improvement projects.

Private Donations - We have received several generous donations from landowners within and adjacent to the study area, and we thank you for your support!

If you are interested in donating, or know of an organization that would be willing to participate in funding this project. Please contact Rio Franzman @ 307-670-3514.

Educational Corner

Aerial Surveying

Q: What is the purpose of an aerial survey?

A: Aerial Observations are conducted to reduce biases typically associated with ground surveys. Aerial surveys provide observers the ability to traverse large tracts of broken terrain using random or systematic sampling design which is impossible to deploy from ground, where vehicles and foot surveys are limited by accessibility. Aerial surveys also provide a platform from which observers effectively can look through even relatively dense vegetation because of the improved vantage point. Because most wildlife flee from low-level flights, increased detection rates are also possible due to movement of deer.

Q: What type of aircraft is used in an aerial survey?

A: Various types of aircraft are used for aerial surveys with the most common being smaller "light aircraft". These aircraft are typically Cessna 172 – 182 size, or a rotor wing aircraft like a Robinson R22.

Q: What is the most difficult part of an aerial survey?

A: Often times, the hardest process in an aerial survey is classifying the animal, especially in months where young are beginning to get larger and more resemble their parents.

Do you have a question? Feel free to send an email to:
rfranzman@habitatmanagementinc.com

Ground Survey Results (Raw)

Ground surveys were conducted on 9/25/13 starting at 5pm. Temperature was 59* and was overcast.

Raw Data for Treatment Area (South)	Fall 2013
White Tailed Does	0
White-Tailed Fawns	0
White-Tailed Bucks	0
Mule Deer Does	3
Mule Deer Fawns	7
Mule Deer Bucks	1
Pronghorn Does	9
Pronghorn Fawns	2
Pronghorn Bucks	3
Pronghorn (Unidentified)	6
Elk Bulls	0
Elk Cows	0
Elk Calves	0
Predators	0
Turkeys	0

Raw Data for Non-Treatment Area (North)	Fall 2013
White Tailed Does	0
White-Tailed Fawns	0
White-Tailed Bucks	0
Mule Deer Does	0
Mule Deer Fawns	0
Mule Deer Bucks	3
Pronghorn Does	18
Pronghorn Fawns	2
Pronghorn Bucks	4
Pronghorn (Unidentified)	11
Elk Bulls	0
Elk Cows	0
Elk Calves	0
Predators	0
Turkeys	5

Aerial Survey Results (Raw)

Aerial surveys were conducted on 10/1/2013 under clear skies at a temperature of 69*. The starting time was 3pm. All transects were conducted flying at 200 feet above ground level (AGL). Species were marked as unidentified if sex or age could not be distinguished.

Raw Data for Treatment Area (South)	Fall 2013
White Tailed Does	0
White-Tailed Fawns	0
White-Tailed Bucks	0
Mule Deer Does	6
Mule Deer Fawns	1
Mule Deer Bucks	0
Pronghorn Does	68
Pronghorn Fawns	0
Pronghorn Bucks	3
Pronghorn (Unidentified)	94
Elk Bulls	1
Elk Cows	14
Elk Calves	0
Predators	0
Turkeys	0

Raw Data for Non- Treatment Area (North)	Fall 2013
White Tailed Deer	4
White-Tailed Fawns	0
White-Tailed Bucks	1
Mule Deer Does	10
Mule Deer Fawns	2
Mule Deer Bucks	2
Pronghorn Does	141
Pronghorn Fawns	43
Pronghorn Bucks	11
Pronghorn (Unidentified)	47
Elk Bulls	0
Elk Cows	0
Elk Calves	0
Predators	0
Turkeys	0

Project Title: Coyote control targeted on mule deer fawning areas at Cedar Mountain
Brief Description of Project: Program of targeted predator control on key fawning ranges when it is most effective for the benefit of mule deer in the Uinta mule deer herd unit. Work targeted using data from the radio collar study
Submitted By / Affiliation: Jeff Short / Wyoming Game and Fish Department

The project area is located within Uinta and Sweetwater Counties in deer hunt area 132. This is within the Uinta mule deer herd unit and is commonly referred to as the Cedar Mountain area. The project commenced May 1, 2012 and will run through July 2014.

The Uinta/Cedar Mountain deer herd has not been able to fully recover from a severe population crash that occurred in the early 1990's. Manipulations of hunting season strategies alone have not improved overall herd numbers. Fawn recruitment continues to suffer and post season fawn ratios are not adequate to grow this herd to our objectives.

Several studies have found that the vast majority of coyote caused mortalities on mule deer occur in the first two months of their lives. This predation is usually by a select number of coyotes occupying specific fawning ranges. It is often intensified during times of low availability of alternate prey, depressed deer populations and where fawns are vulnerable due to habitat limitations. This may be the case at the present time since rabbit populations are at a low, mule deer numbers are depressed and deer in the area are experiencing low fawn recruitment. It has been found that coyote control done to benefit mule deer is far more effective if done in high intensity on specific fawning ranges immediately before, during and right after the fawning and done to specifically target coyotes active in those areas.

From our recent mule deer study funded in part by ADMB we have gained valuable information on the mule deer population in the area. We found that 98% of captured does were pregnant in the winter. This high pregnancy rate is typical for mule deer. We followed those radio collared does in June and found that at least 80% of pregnant does had a minimum of one fawn at side. During the following December we flew extensive classification surveys in those areas and found a fawn:doe ratio of only 46:100. That means on average only 46% of does still had a single fawn surviving to 6 months of age. This is a very low figure indicating a very dire situation for the mule deer herd. Doe survival was very high from the previous winter at 96% and doe condition appeared to be at or above normal. Mule deer fawning habitats are very limited in this area and the amount of quality habitat is most likely restricting the ability to grow fawns to 6 months old. Coyote predation on fawns is exacerbated by the small areas available for mule deer fawning habitat. A coyote can be very effective at hunting fawns when there are small patches of quality fawning habitat to hunt. The identified fawning habitats have not received predator control treatment in the past. A three year intensive coyote removal effort was advised. The Muley Fanatic Foundation of Wyoming (MFF) funded year one of this work in 2012. ADMB and the MFF jointly funded year two and three of the project in 2013 and 2014. After treatments we can look at post treatment faw:doe ratios to determine the effectiveness of our efforts.

The Uinta County Predator Board provides personnel, support, ground work and local expertise in the coyote removal efforts. They contract with a competent vendor to complete the aerial gunning operations. The funding allows for approximately 12-15 hours per year of helicopter coyote removal. This is time specific on identified mule deer fawning ranges. Maps of key identified fawning ranges are provided to the Uinta County Predator Board. Those maps have been updated yearly as new data is analyzed. Coyote removal is conducted immediately prior to, during or immediately after mule deer fawning. This typically occurs in the first week of June in this area. This maximizes the benefit to mule deer. After the project is complete and all data is collected by the end of 2014 we will be able to analyze changes in Fawn:doe ratios in Hunt Area 132

ADMB budget expenditures

helicopter coyote removal	\$ 5,000.00
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WYOMING GAME AND FISH DEPARTMENT

5400 Bishop Blvd. Cheyenne, WY 82006

Phone: (307) 777-4600 Fax: (307) 777-4699

wgfd.wyo.gov

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AARON CLARK
KEITH CULVER
MIKE HEALY
T. CARRIE LITTLE

October 22, 2014

MEMORANDUM

TO: Kent Drake, Predator Management Coordinator

FROM: Scott C. Edberg, Deputy Chief, Wildlife Division

COPY TO: Scott Werbelow, Tracey Kupec, file

SUBJECT: FY14 ADMB Grant R00181– Cody Region Animal Handling Equipment

This memo serves as the written report as it pertains to the expenditures of the FY14 ADMB Grant R00181–Cody Region Animal Handling Equipment, which was in the amount of \$1,100.00. The Wyoming Game and Fish Department's (Department) Cody Region purchased five (5) catch poles, three (3) skunk traps and two (2) multi-purpose collapsible traps, totaling \$1090.00.

This new equipment has been very beneficial to both Cody Region employees and the general public in dealing with wildlife (primarily small mammals) conflicts in a more effective and efficient manner. In many instances, the traps are loaned to the public (which they are very appreciative of) so that they can address the wildlife conflict directly themselves, thus freeing up Department employee time to work on other wildlife issues.

SE/se



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T. CARRIE LITTLE

October 8, 2014

MEMORANDUM

TO: Kent Drake, Predator Management Coordinator

FROM: Scott C. Edberg, Deputy Chief, Wildlife Division

COPY TO: Brian DeBolt, Tracey Kupec, file

SUBJECT: FY14 ADMB Grant R00179 - Gray Wolf Management Supplies

This memo serves as the written report as it pertains to the expenditures of the FY14 ADMB Grant R00179 - Gray Wolf Management Supplies, which was in the amount of \$5,000.00.

The Wyoming Game and Fish Department's (Department) Large Carnivore Section purchased twenty-five (25) gray wolf trap monitors at \$225.00/each for a total of \$5,625, which expended the total grant amount of \$5,000.00. The \$625.00 above the grant amount was paid for from other funding sources.

The new trap monitors have been very useful when trapping wolves in bear country. In those instances where a bear takes off with a wolf trap, the safety of Department personnel was greatly improved by having a working trap monitor attached to the trap. Upon purchase, the trap monitors were made be available to appropriate Department personnel, with the possibility that they could be loaned to Wildlife Services or USFWS personnel if needed for their wolf trapping projects upon request.

SE/se

Wyoming Range Mule Deer Project



2014 Spring Update



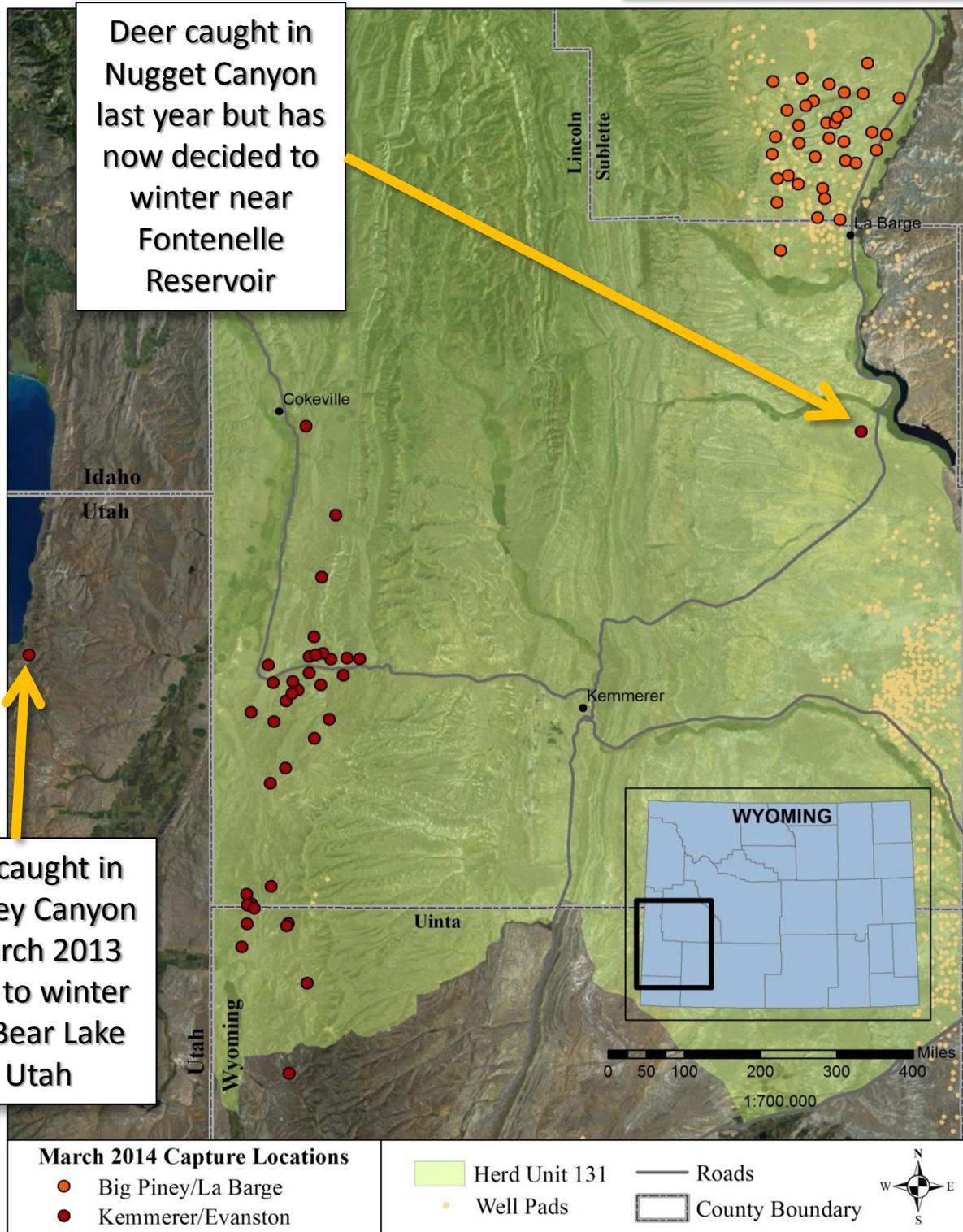
The Wyoming Cooperative Fish and Wildlife Research Unit and the Wyoming Game and Fish Department, along with numerous research partners initiated the Wyoming Range Mule Deer Project during winter 2012-2013. The overarching goal of the project is to investigate the nutritional relationships between mule deer population dynamics, energy development and disturbance, habitat conditions, and climate to provide a mechanistic approach to monitoring and management of mule deer. The first helicopter capture occurred in March 2013 with the capture of 70 adult females in the northern (Big Piney / La Barge) and southern (Kemmerer / Evanston) winter ranges. We captured 35 deer on each respective winter range, and animals were fitted with GPS collar that will be worn for 2 years. This has enabled us in tracking trends of nutritional condition, reproduction, survival, and habitat selection of each individual.

This March marked the completion of the first year of research. Many accomplishments have been made along the way including 3 successful captures and recaptures of collared deer. The following highlights the progress we have made over the winter.



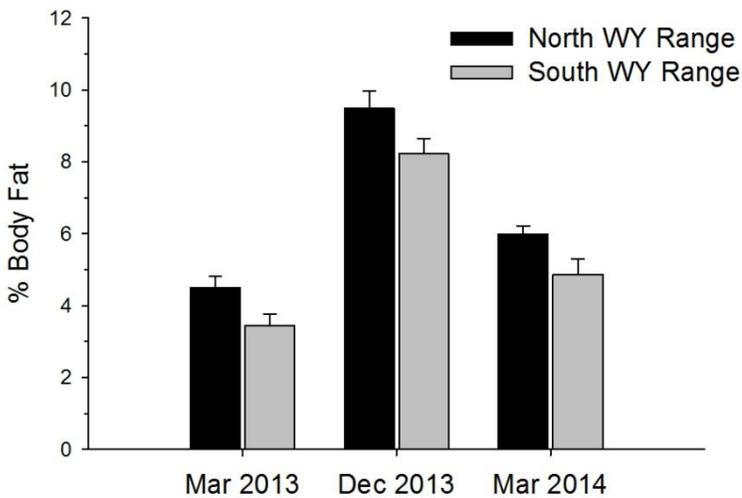
March 2014 Recaptures

In March, we successfully recaptured all collared deer. For each captured animal, we measured changes in nutritional condition (i.e. body fat) over the winter and downloaded GPS data from collars. *Most* deer returned to the same winter ranges they occupied in 2013. Two deer, however, did not follow suit and were found >40 miles from where they wintered in 2013.



Nutritional Condition

At each capture, we use ultrasonography to measure changes in body fat as collared deer enter and leave winter ranges. With the completion of three captures (March 2013, December 2013, and March 2014), we have been able to track changes in body fat over two complete seasons – one summer and one winter.

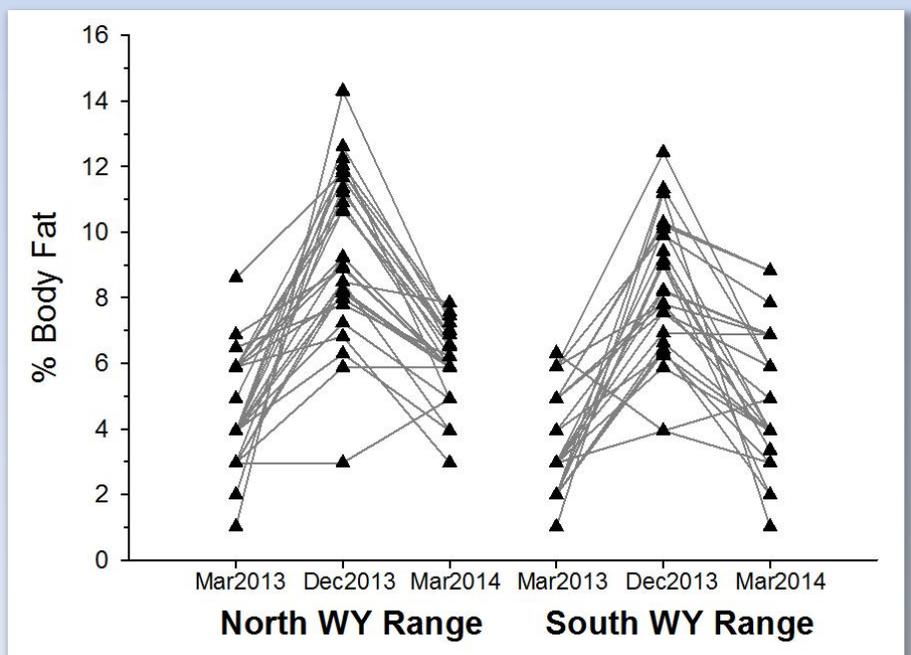


Deer were in better nutritional condition in March 2014 than in March 2013, by more than 1% body fat in both the northern and southern winter ranges (Table 1).

As is commonly observed for overwintering mule deer, most individuals acquired fat in the summer and lost fat in the winter. There were, however, some individuals that did not adhere to that traditional trend and actually lost fat in the summer and gained fat in the winter. There are a number of factors that can influence the dynamics of body fat, such as habitat conditions, climate, and reproduction. By rigorously measuring changes in nutritional condition (i.e. fat reserves), we will establish a better understanding of the factors that interact to determine seasonal dynamics in nutrition for Wyoming Range deer.

Table 1:

	Mar 2013 % Fat		Dec 2013 % Fat		Mar 2014 % Fat	
	Mean	SE	Mean	SE	Mean	SE
North WY Range	4.49	0.32	9.48	0.48	5.99	0.22
South WY Range	3.45	0.31	8.22	0.43	4.87	0.42

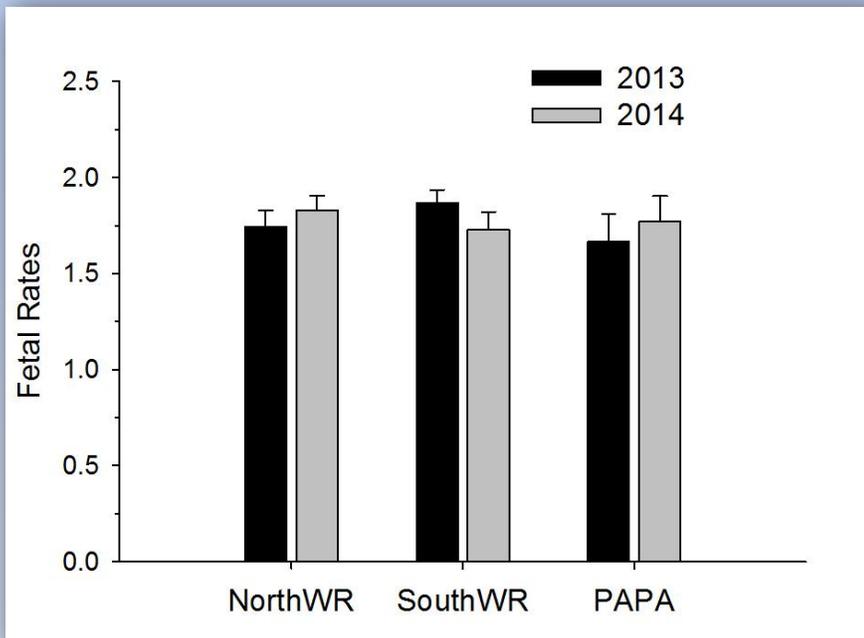


Reproduction

Each March, we use ultrasonography to assess pregnancy and measure fetal rates.



<u>March 2014 Pregnancy Rates</u>	
North WY Range	97%
South WY Range	95%
PAPA	95%



High pregnancy and fetal rates are common among mule deer populations throughout the west and most deer are pregnant with twins, but maternal nutritional condition at parturition is closely tied to the potential for a fawn to be successfully reared. The figure to the left is of fetal rates of Wyoming Range mule deer as well as deer that winter on the Pinedale Anticline (Mesa) and illustrates little variation in fetal rates between winter ranges and years.

Mortalities

Although annual snowpack for most of Wyoming exceeded 120% this winter, the winter ranges remained relatively free of snow. Such conditions can provide deer with exposed forage that can aid in winter survival. We observed only 2 mortalities of our 70 collared deer since December; the wet summer and mild winter experienced in 2013/2014 may have contributed to the low mortality rates.

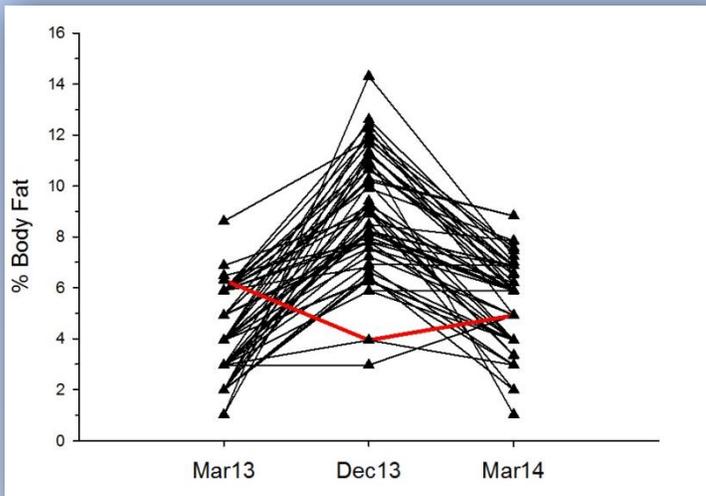


Connecting Dots

With the completion of our first year of the project, it is possible to begin to compile histories of individual animals and the environment they experience. When coupled with their changes in nutritional condition along with reproductive success, interesting patterns begin to emerge.

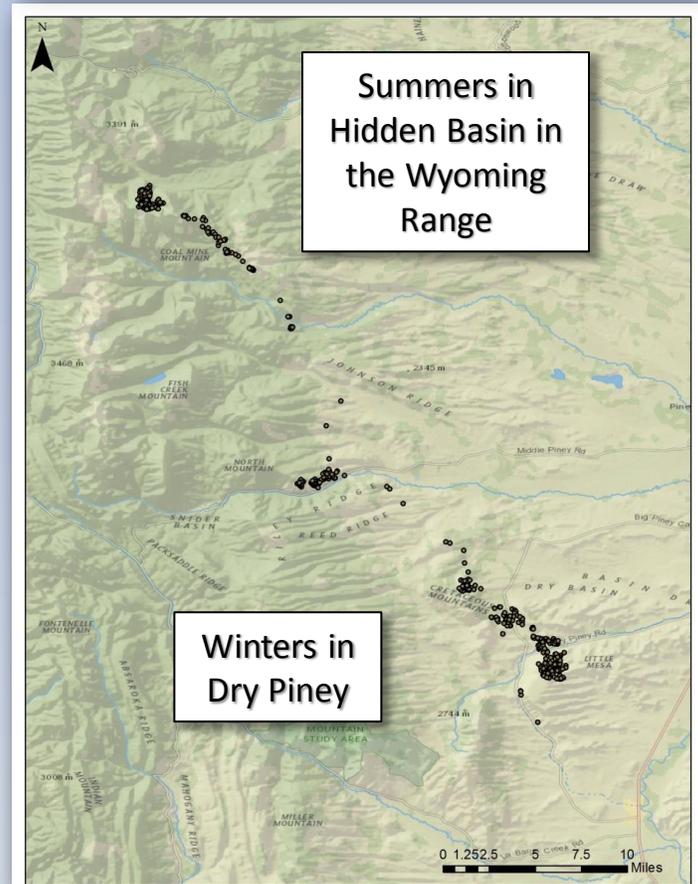
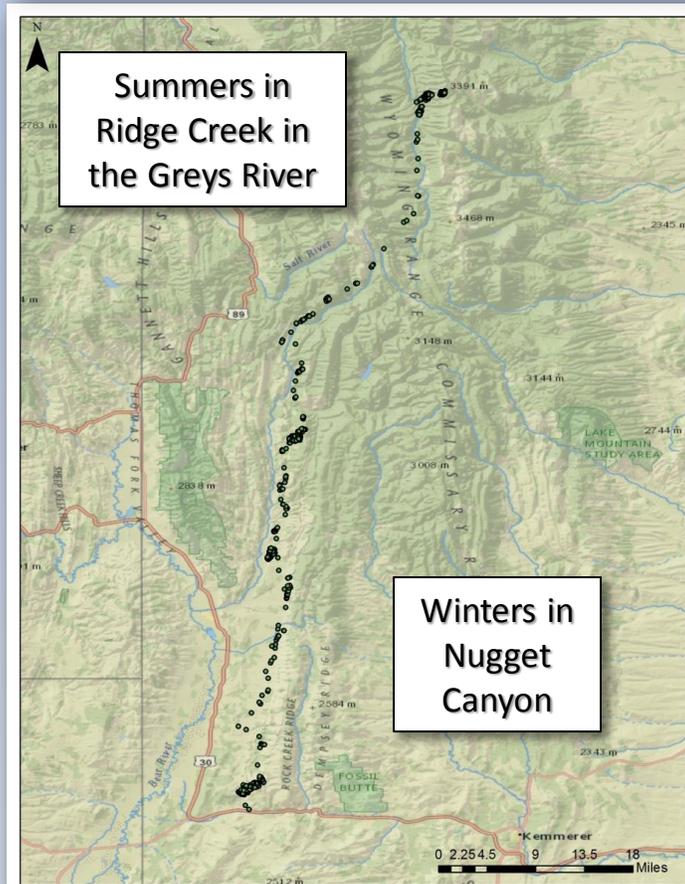
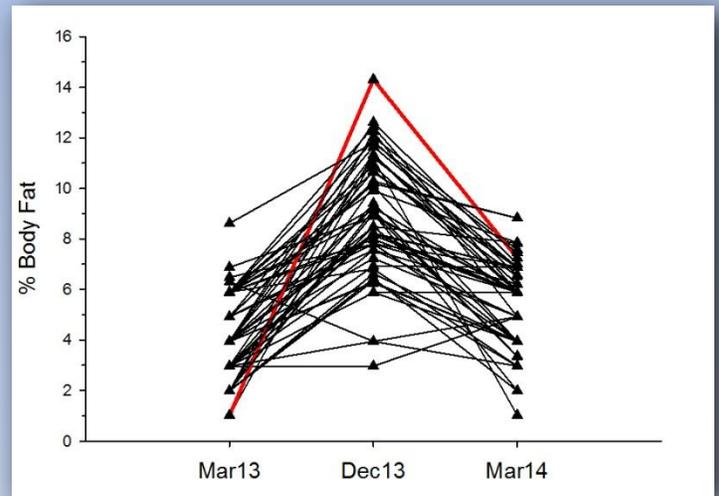
Deer ID: 069

Capture	Reproductive Status	Body Fat
March 2013	2 fetuses	6.3%
December 2013	2 fawns	3.9%
March 2014	2 fetuses	4.9%
	Age = 6	



Deer ID: 030

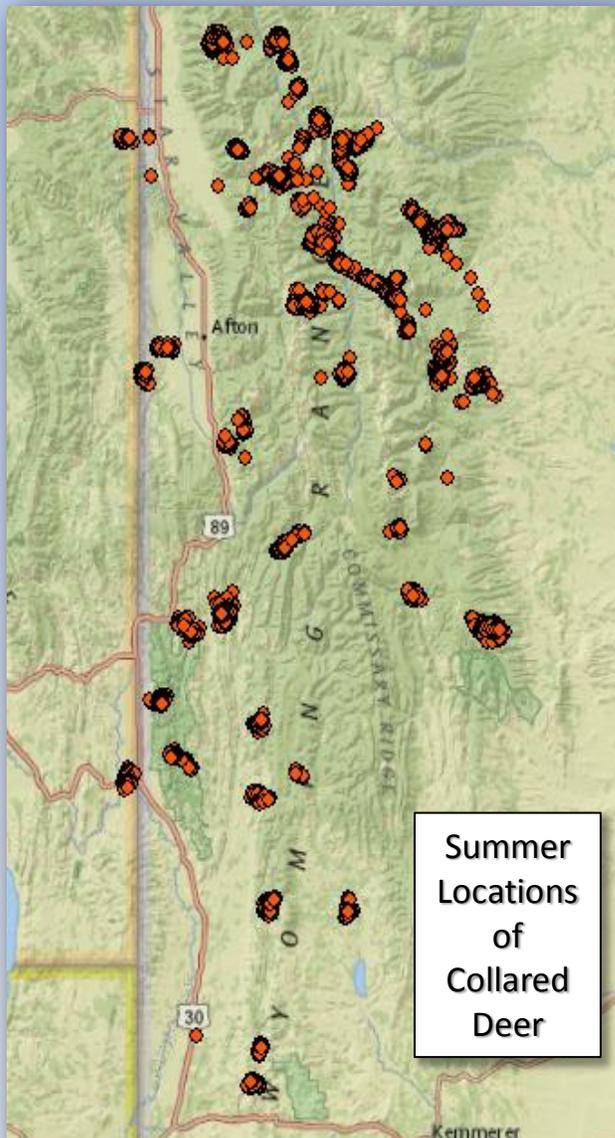
Capture	Reproductive Status	Body Fat
March 2013	2 fetuses	1.0%
December 2013	0 fawns	14.3%
March 2014	2 fetuses	7.2%
	Age = 9	



What's Next?

Habitat Conditions

We will continue to collect data on habitat conditions on summer and winter ranges. Starting in May, we will measure mule deer utilization of available browse at each of the 150 shrub transects established in October 2013. We will then compare utilization with measurements of browse production collected from the previous fall.



We will continue to collect data on forage quality of summer ranges of collared deer. The habitat conditions experienced in the summer directly affects nutritional condition (in terms of fat accumulation) which then carries over to influence reproduction and survival in the following winter months. Using data collected in the summer, we will reconstruct diet composition of individual deer to evaluate how forage quality influences an individual's ability to gain fat reserves while supporting reproduction over the summer months.

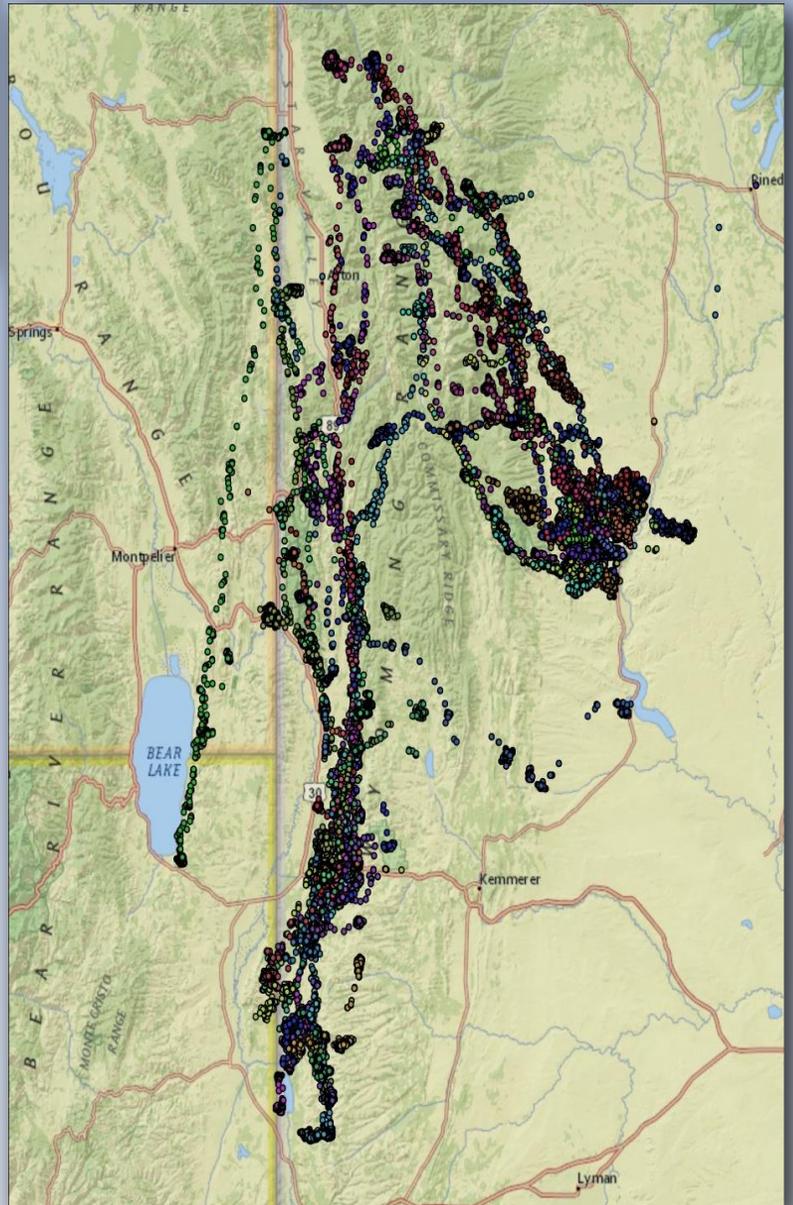


A New Face to the Project

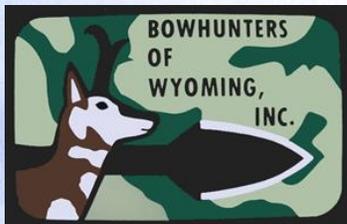


We would like to introduce you to the newest member to the Wyoming Cooperative Fish and Wildlife Research Unit, Ellen Aikens. She comes to the team as a GIS guru with specialized interests in movement ecology. Starting in May, she will begin her PhD research investigating the mechanisms that drive mule deer migration and fine-scale movements on summer range. Ellen grew up on the East Coast in Kintnersville, PA. She obtained her BS at Urisnus College, PA and most recently has worked as a Research Assistant and GIS Lab Manager for the Smithsonian Conservation Biology Institute.

Ellen's work will take advantage of the intensive monitoring and wealth of data we are accumulating with the Wyoming Range Mule Deer Project. In particular, she will be making use of the GPS data collected on the radiocollared deer, with a keen eye directed towards connecting deer movement with plant phenology, and the resulting changes in nutrition. In collaboration with Dr. Geneva Chong of USGS, Ellen's work will be supported through funding sources including WLCI, a Berry Institute Graduate Fellowship, and a fellowship from the National Science Foundation. Ellen comes to us with extensive experience in spatial analysis, which makes her a great fit for the project and will most surely contribute valuable insight into understanding the movement ecology of mule deer.



The Wyoming Range Deer Project would not be possible without the financial and logistical contributions of our research partners. Funds have been provided by the Wyoming Game and Fish Department, Muley Fanatic Foundation, Wyoming Wildlife and Natural Resource Trust, Knobloch Family Foundation, Bureau of Land Management, Wyoming Governor's Big Game License Coalition, Boone and Crockett Club, Animal Damage Management Board, Ridgeline Energy Atlantic Power, Bowhunters of Wyoming, Sportsmen for Fish and Wildlife, and the Wyoming Outfitters and Guides Association. Thanks to the National Forest Service and Fossil Butte National Monument for providing housing in the study area. Finally, thanks to all who were able to assist with captures, and a special thanks goes to WGFD and BLM personnel who provided further assistance with browse production and fawn surveys.



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Wyoming Range Mule Deer Project



2014 Winter Update



The Wyoming Cooperative Fish and Wildlife Research Unit and the Wyoming Game and Fish Department, along with numerous research partners, initiated the Wyoming Range Mule Deer Project during winter 2012-2013. The overarching goal of the project is to investigate the nutritional relationships between mule deer population dynamics, energy development and disturbance, habitat conditions, and climate to provide a mechanistic approach to monitoring and management of mule deer. The first helicopter capture occurred in March 2013 with the capture of 70 adult females in the northern (Big Piney / La Barge) and southern (Kemmerer / Evanston) winter ranges. We captured 35 deer on each respective winter range, and animals were fitted with GPS collar that will be worn for 2 years. This has enabled us in tracking trends of nutritional condition, reproduction, survival, and habitat selection of each individual. Much has been accomplished since the initial capture of our study animals, and we are well underway with data collection. This update highlights the progress we've made thus far toward achieving those research objectives.



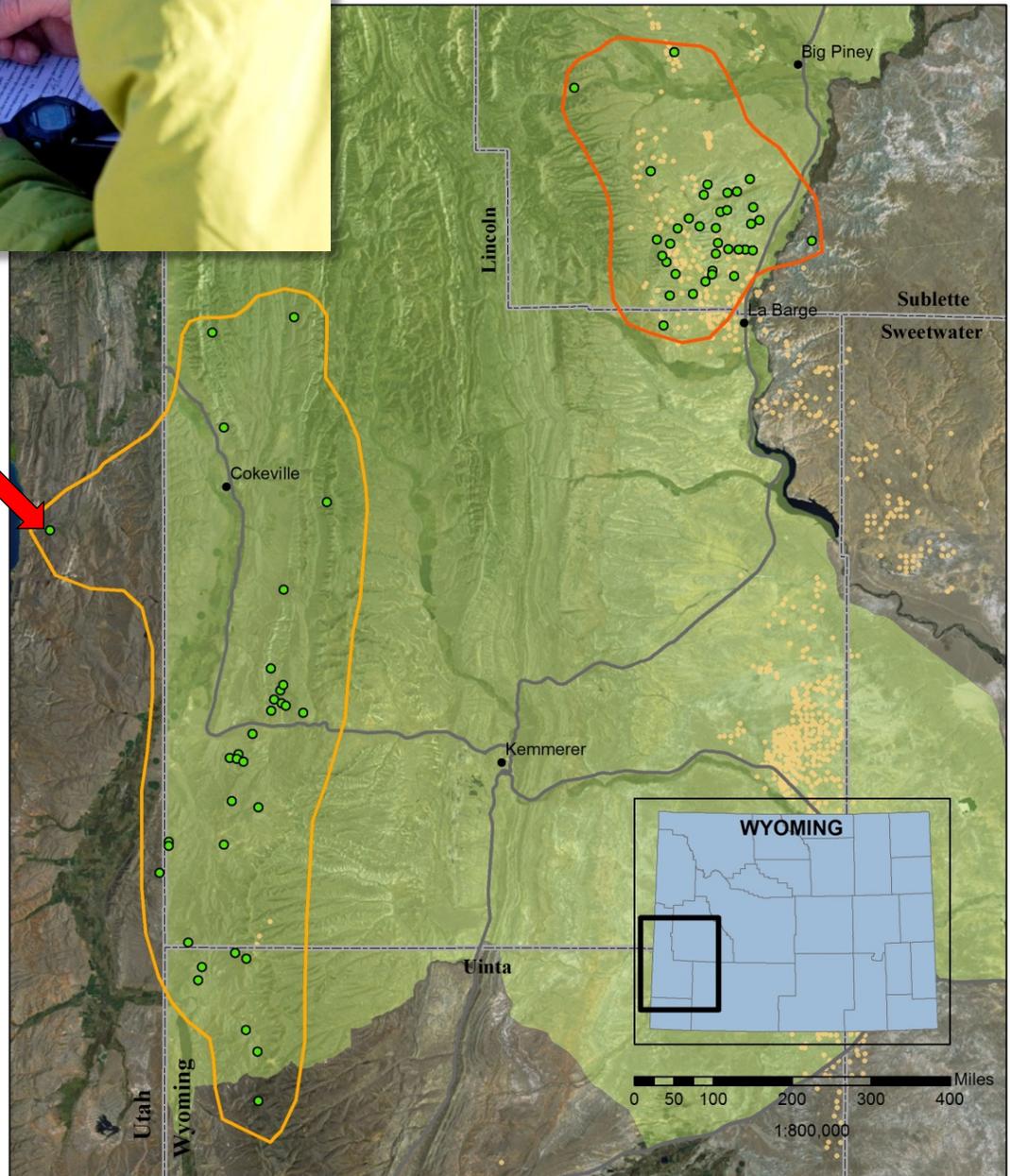
December 2013 Recaptures

In early December, we recaptured deer collared in March 2013 in addition to capturing new deer that were fitted with collars retrieved from mortalities. For each captured animal, we measured changes in nutritional condition over the summer and downloaded GPS data from collars.



Satellite collared deer recaptured near Bear Lake!

Some deer had yet to arrive back to winter range where they were captured last March, which presented a challenge for our December capture. Fortunately, GPS data downloaded via satellite uplink and fixed-wing flights prepared us for relocation of deer in unexpected places. Despite the adversities, we were able to recapture 95% of the collared deer in December.

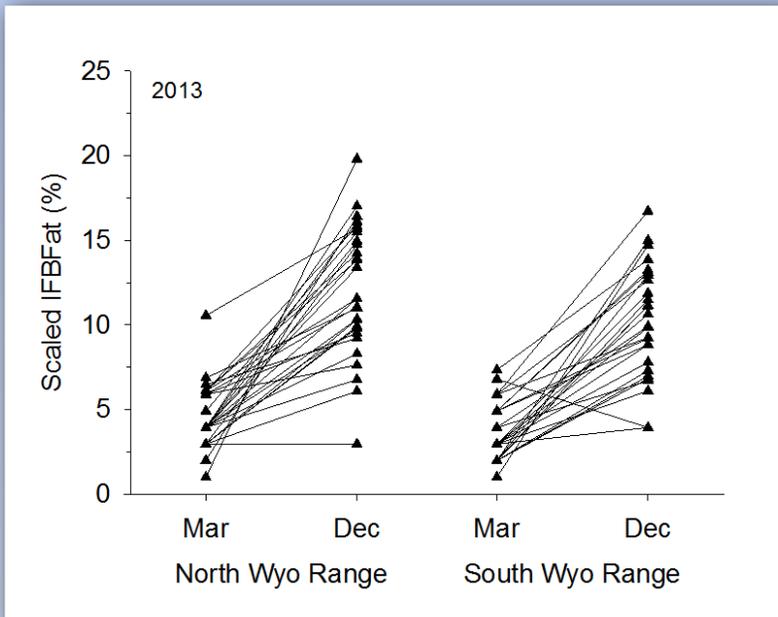
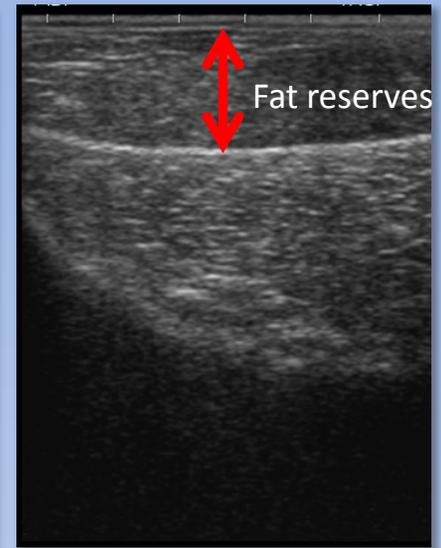


December 2013 Capture Areas	● Capture Locations	— Roads
○ Big Piney/La Barge	● Herd Unit 131	□ County Boundary
○ Kemmerer/Evanston	● Well Pads	

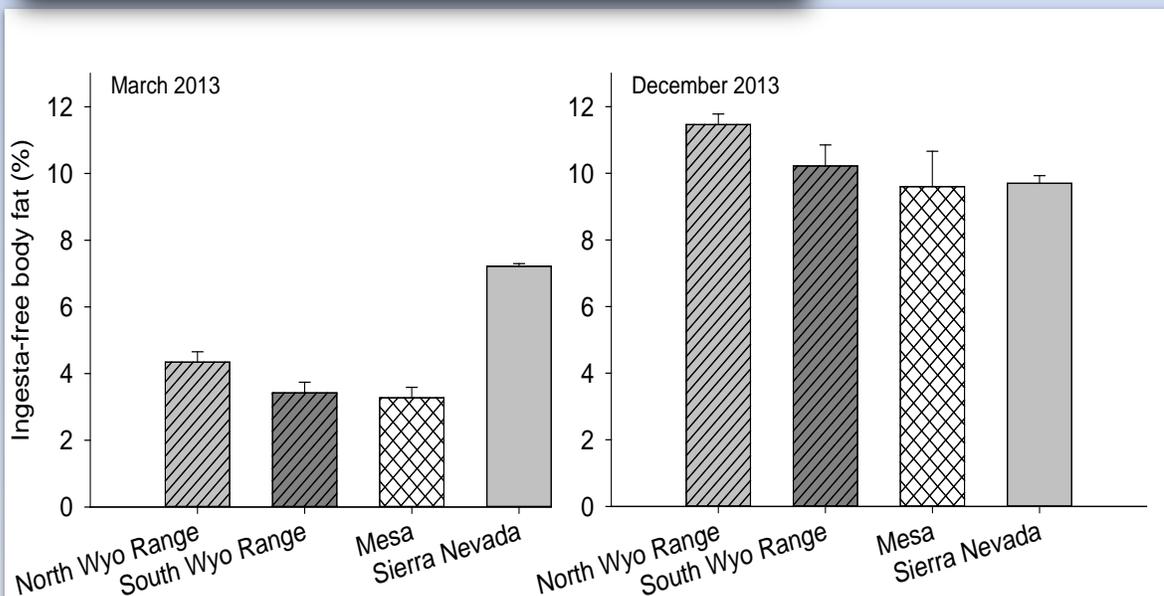
Nutritional Condition

Using ultrasonography, we measured body fat of each captured deer in March and December of 2013 to track changes in nutritional condition as deer leave and enter winter ranges. Although there are numerous factors that may influence nutritional condition, such as habitat and climatic conditions, the demands of reproduction add a substantial cost to females in terms of the energetic demands of successfully rearing fawns. By measuring the fluctuations in

fat reserves (i.e. nutritional condition), we will be able to develop a better understanding of the nutritional relationships among habitat, reproduction, and survival.



As expected, most animals were in better condition in December (mean=10.5%) when compared with March (mean=4.0%). The figure to the left displays changes in percent body fat between spring and winter for each collared individual for both northern and southern winter ranges. While most show increases in body fat from March to December, such patterns vary among individuals which we will subsequently link to reproductive effort and habitat conditions experienced by each female.

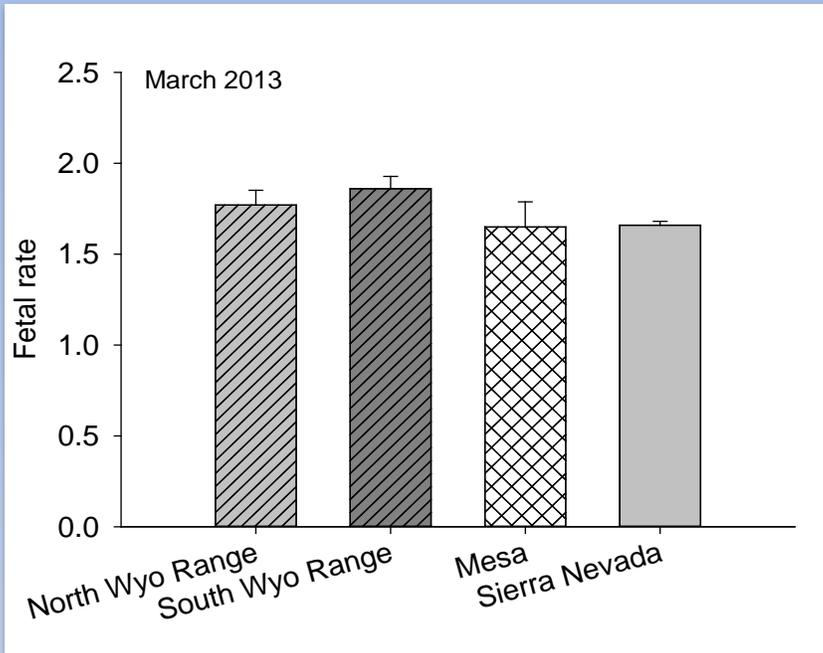


The figure below displayed average body fat among the Wyoming range winter ranges, the Mesa to the SW of Pinedale, and that collected during a long-term study of mule deer in the Sierra Nevada of California.

Reproduction

Fetal Rates

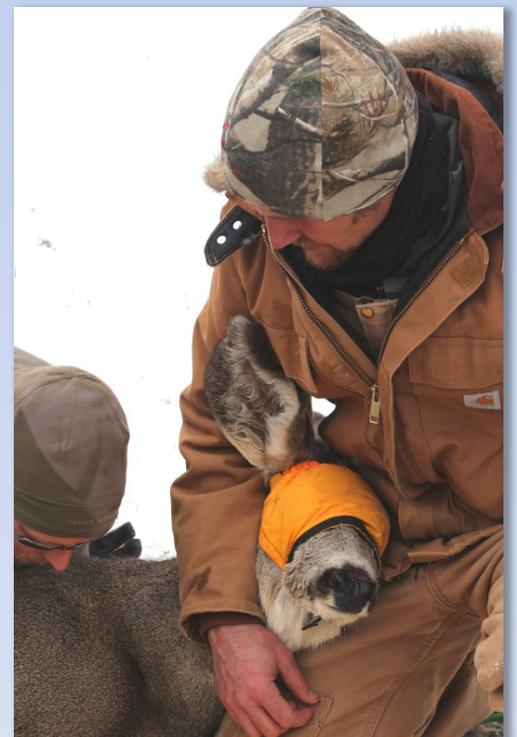
In March 2013, we used ultrasonography to confirm pregnancy and measure fetal rates of individuals.



Although high fetal rates are common among mule deer populations throughout the west and most deer are pregnant with twins, maternal nutritional condition at parturition is closely tied to the potential for a fawn to be successfully reared. This chart shows fetal rates of Wyoming Range mule deer as well as deer that winter on the Mesa to the SW of Pinedale and in the Sierra Nevada of California.

Recruitment

As animals returned to winter ranges, each collared deer was relocated and data on fawn status was collected to assess the reproductive success of individuals. 63% of all collared deer successfully recruited at least one fawn. Overall, recruitment rates were high among winter ranges with a rate of 0.71 (± 0.713) for northern deer and 0.91 (± 0.733) for southern deer.



We also measured lactation status at capture to corroborate our data collected during our recruitment surveys.

Habitat

Winter Range

We established shrub transects in each of the northern and southern winter ranges as well as on the Pinedale Anticline to monitor trends in browse production and utilization of Wyoming Big Sagebrush in relation to climate and disturbance from energy development.

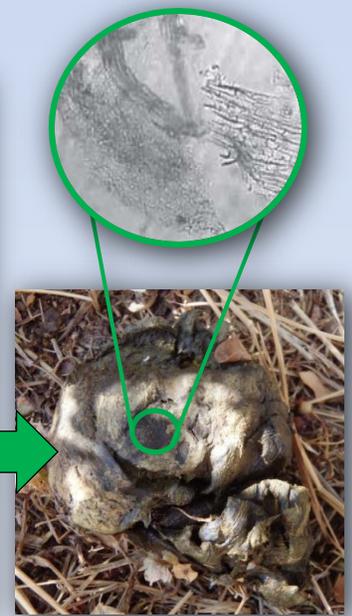
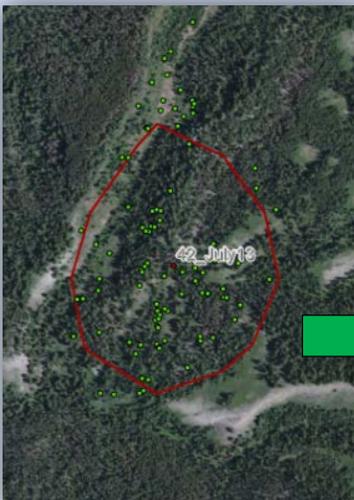
<u>N</u>	<u>Winter Range</u>
50	Big Piney / La Barge
50	Evanston / Kemmerer
50	Pinedale Anticline



The first measurements of production were collected in fall 2013, before deer entered winter ranges, and utilization will be measured in spring 2014, after deer have departed for summer ranges. These measurements will be repeated at the same transects through spring 2015.

Summer Range

This past summer we collected fecal samples from summer home ranges of collared deer to evaluate diet composition and nutritional quality of forage. Home ranges were delineated on a weekly basis from GPS data downloaded from collars capable of satellite uplink. We collected samples from each home range in June, July, and August to capture the potential change in forage quality as fawns grow and energetic demands of maternal care increases. We will use microhistological analysis to identify plant species that comprise the majority of each individual's diet and will collect plant samples from those species in summer 2014 to evaluate the digestibility and crude protein of summer forage.



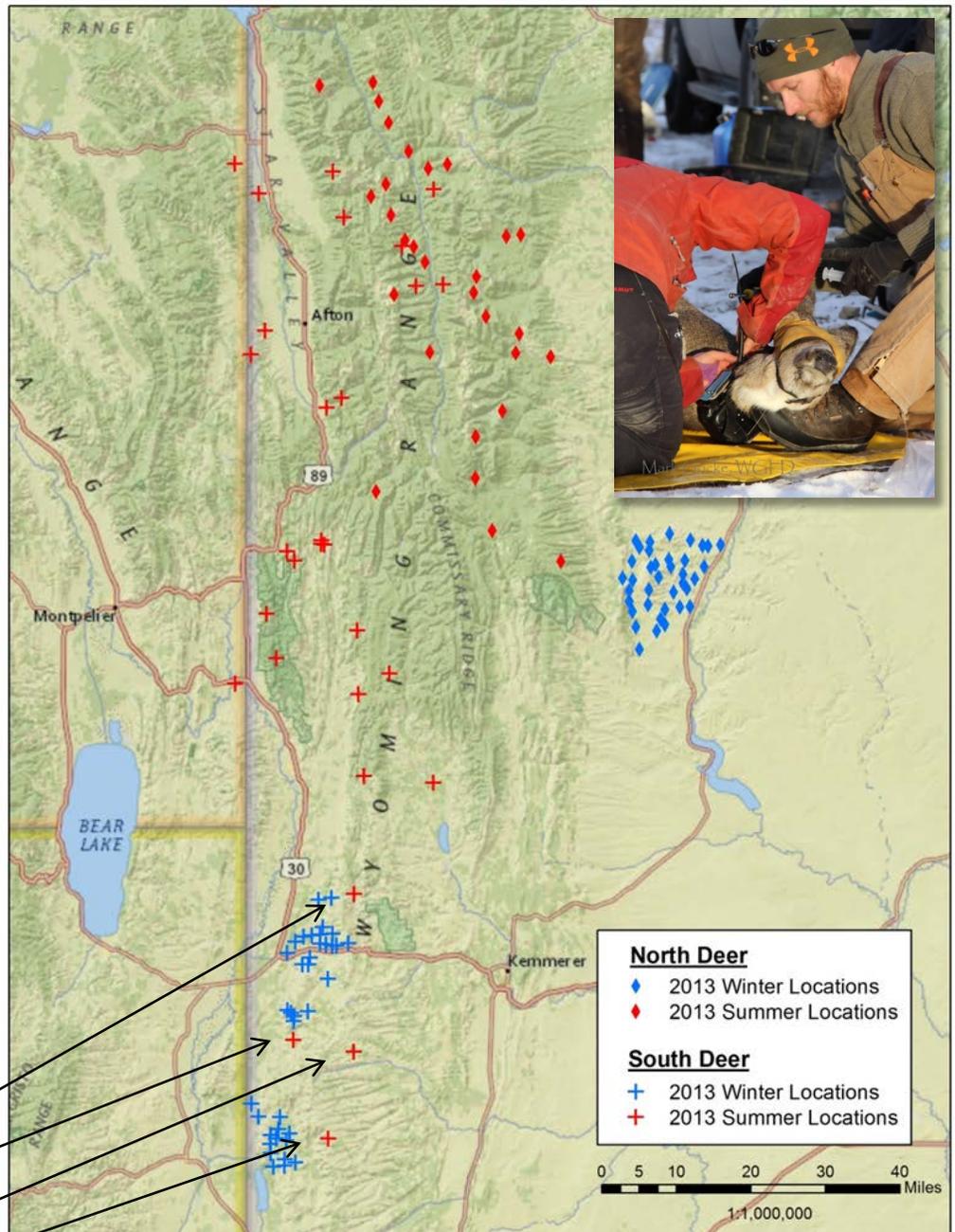
Mortalities

We retrieved collars from 8 deer mortalities throughout the spring and summer months. Most carcasses were well scavenged upon retrieval of the collar and thus, cause of death was undetermined .



Movements

We downloaded GPS data from all collared deer recaptured in December to provide preliminary insight into movement patterns between winter and summer ranges. All deer of the northern winter range migrated to summer ranges in the high country of the Wyoming Range while several deer of the southern winter range moved only short distances following winter and remained in, or very near, their winter range. Summer locations of southern deer that did migrate varied widely and included areas throughout Star Valley, the Smiths Fork drainage, and the Wyoming Range.



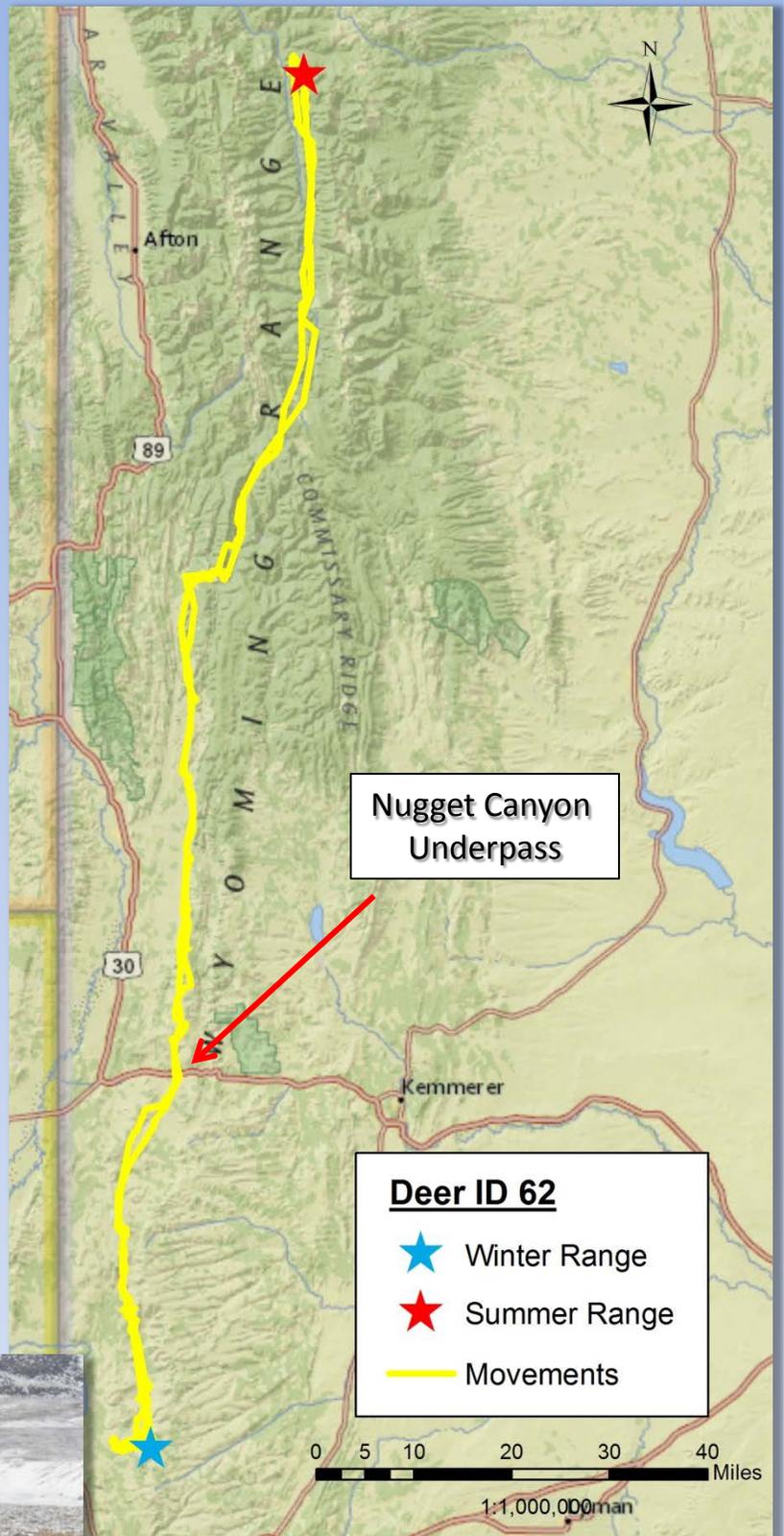
4 southern deer that remained near their winter ranges.

A Great Migration

Downloaded data from GPS collars are beginning to reveal patterns in migration routes, distances, and timing for individual animals.



This map of downloaded locations from Deer ID 62 is an example of some of our preliminary findings on individual migration patterns. This 10-year old deer traveled 150 miles from her winter range, just north of Evanston, to summer range along the Greys River drainage. In the fall, she followed almost the exact same path back to her winter range where she was recaptured in December. Her migration is one of the longest documented migrations by a terrestrial mammal in North America.



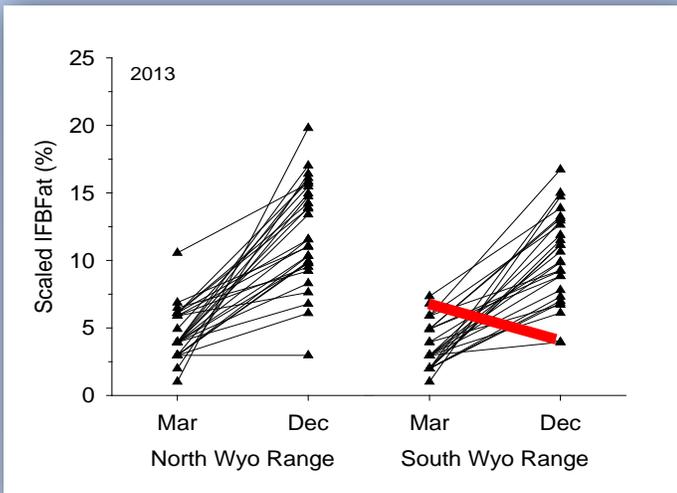
Dr. Kevin Monteith and Samantha Dwinnell of the Wyoming Coop Unit releasing Deer ID 62 after recapturing her in December.

Connecting the Dots

With less than one year of data collection under our belts, we are beginning to acquire enough information on individuals to begin identifying preliminary trends in the relationships among habitat use, nutritional condition and reproduction. The following are examples of the stories that are starting to emerge from those data.

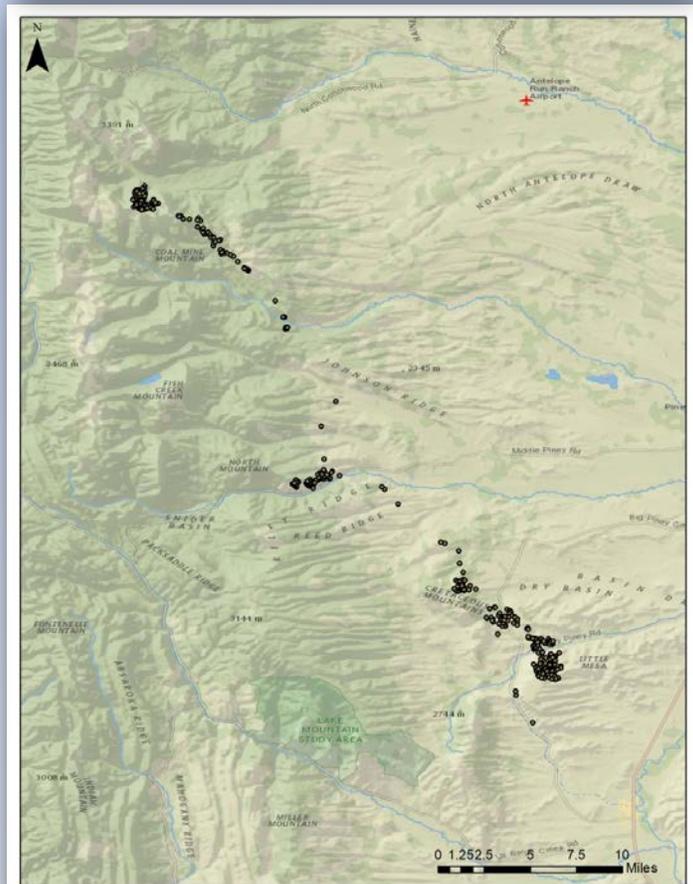
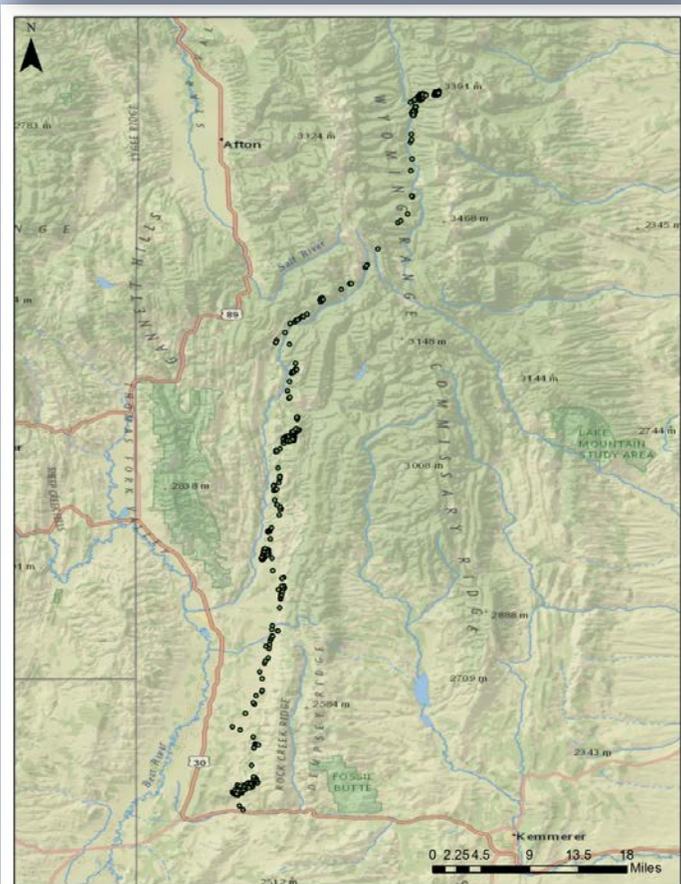
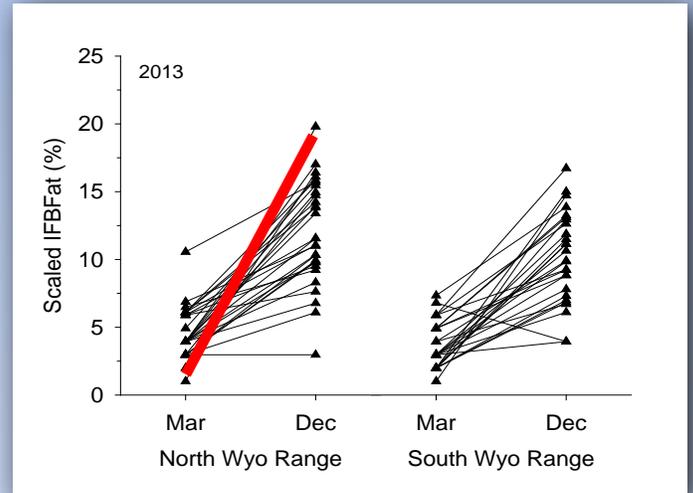
Deer ID: 069

Capture	Reproductive Status	% Body Fat
March	2 fetuses	6.7
December	2 fawns	3.9
	Age = 5	



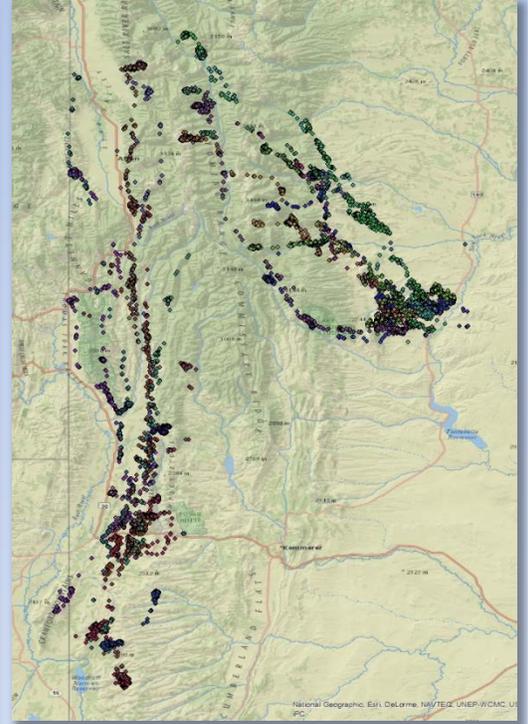
Deer ID: 030

Capture	Reproductive Status	% Body Fat
March	2 fetuses	1.0
December	0 fawns	19.8
	Age = 8	



The Story Continues...

We will continue to gather data on nutritional condition, habitat use, reproduction, and survival of collared animals. We will do this by recapturing each animal in March and December until March 2015. At each capture, we also will continue to fit new deer with collars retrieved from mortalities. Finally, we will continue all efforts in measuring habitat conditions of winter and summer ranges through May 2015. Stay tuned for future updates.



The Wyoming Range Deer Project would not be possible without the financial and logistical contributions of our research partners. Funds have been provided by the Wyoming Game and Fish Department, Muley Fanatic Foundation, Bureau of Land Management, Wyoming Wildlife and Natural Resource Trust, Knobloch Family Foundation, Wyoming Governor's Big Game License Coalition, Boone and Crockett Club, Animal Damage Management Board, Ridgeline Energy Atlantic Power, Bowhunters of Wyoming, Sportsmen for Fish and Wildlife, and the Wyoming Outfitters and Guides Association. Thanks to the National Forest Service and Fossil Butte National Monument for providing logistical support and housing for our personnel in the study area. Finally, thanks to all who were able to assist with captures in March and December 2013, and a special thanks to WGFD and BLM personnel who provided further assistance with browse production and fawn surveys.



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